

THE AUTOMOBILE

VOL. XIII.

NEW YORK—THURSDAY, JULY 27, 1905—CHICAGO

No. 4

GLIDDEN TOUR FINISHES IN NEW YORK.

By HARRY W. PERRY.

TWENTY-SIX of the thirty-two pleasure automobiles that departed from New York on July 11, in competition for the Charles J. Glidden touring trophy, finished the run in good time last Saturday evening at the Plaza, New York City. They had been driven over 870 miles of roads of

sort ever held in America; the cars made a better showing mechanically than ever before proportionately to the distance traveled, showed greater endurance and reliability over bad roads, and the contestants and passengers enjoyed the tour and the social intercourse more than ever before.

over long distances of diversified country, and, from the excellent showing made by a large proportion of the cars, he thought a difficult problem lay before the tour committee to decide to whom to award the trophy. A meeting of the committee is to be held for this purpose the first week in

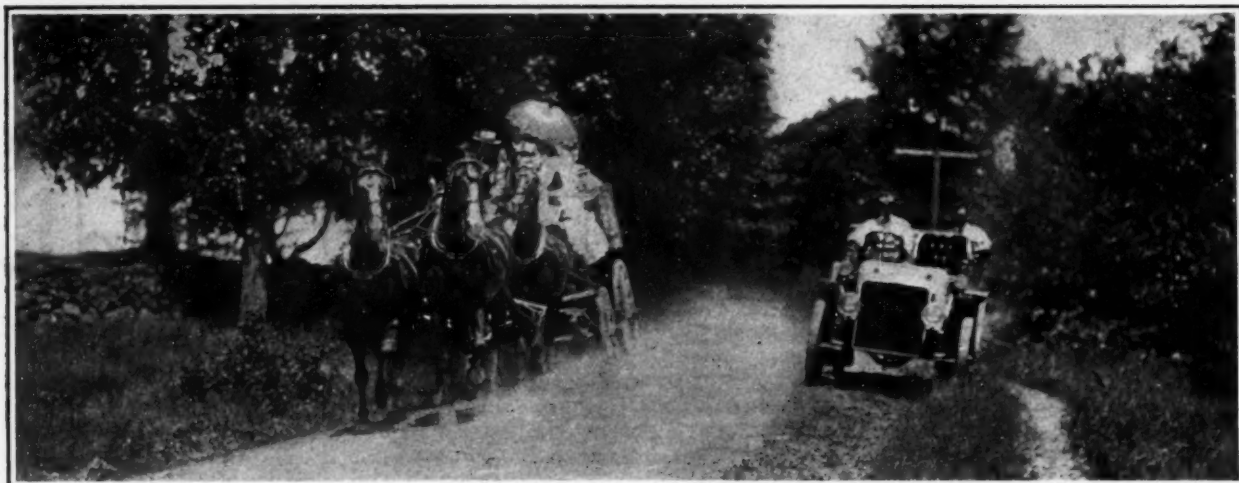


STANLEY CAR MAKING FASTEST TIME FOR A STEAMER UP MT. WASHINGTON DURING GLIDDEN TOURISTS' VISIT.

all sorts, from magnificent macadam boulevards to exceedingly dangerous mountain roads, and in eight running days had traversed twice each the states of New York, Connecticut, Massachusetts and New Hampshire. From every point of view the tour was the most successful competition of the

The purpose of the tour, said Mr. Glidden, donor of the handsome trophy which is yet to be awarded, at Yonkers, at the conclusion of the tour proper Saturday afternoon, was to determine what an automobile could do; not in the matter of speed, but as a pleasure vehicle for touring over the roads

August, either in Boston or New York, when the committee will go very thoroughly over the record cards turned in by the contestants at the conclusion of each day's run and over other information upon which credit points are to be given, such as weight in touring condition, number of passengers



NO TROUBLE ABOUT ROOM TO PASS—A ROADSIDE INCIDENT ON RETURN TRIP OF GLIDDEN TOURISTS.

carried, cost and power of car, and hill-climbing ability. If after the process of elimination has been carried to its ultimate degree there are still several cars showing not only perfect scores, but possessing an equal number of credit points, the final decision will be made upon the votes cast by the entrants at the conclusion of the tour. Each contestant filed with his last daily report card a ballot for three cars in the tour which he recommended to the consideration of the tour committee.

As half a dozen or more cars appear to have made clean scores so far as the deed of gift and the conditions for this year's contest are concerned, there is a great deal of speculation among the tourists, as well as among outsiders, as to who will get the trophy. Besides the trophy, certificates are to be given to all contestants who made clean scores.

The finish of the tour was made spectacular by a request issued at Lenox, Mass., on the last night's stop, for all of the tourists to wait at Yonkers, N. Y., upon arrival the following day, until 4 p. m., when all the machines that had assembled would parade into New York City in line. Failure to comply with the request rendered a driver subject to disqualification. By 4 o'clock twenty of the cars had arrived at Yonkers, after a run of 130 miles since 6 a. m., but the first two arrivals, Walter White and W. N. Epping, in White steamers, went on through to New York without waiting for the others.

From Yonkers the other eighteen cars ran into the city by way of Riverdale Avenue, Lafayette Boulevard and Riverside Drive, the dust-covered and travel-worn machines and passengers attracting a great deal of attention in the metropolis. Arriving at the Plaza at 4.45 p. m., the machines were formed into a group to be photographed before dispersing. In the group were the following entries: George O. Draper, 22-horsepower Packard; Edward H. Woods, 18-horsepower Napier; Robert Lee Morrell, 40-horsepower Locomobile; Augustus Post, 15-horsepower White; W.

C. Temple, 40-horsepower Pierce Great Arrow; George H. Tyrrell, 15-horsepower White; Albert L. Pope, 45-horsepower Pope-Toledo; Percy P. Pierce, 40-horsepower Pierce Great Arrow; E. A. Gilmore, 18-horsepower Rambler; Charles E. Walker, 18-horsepower Pope-Hartford; Harold L. Pope, 12-horsepower Pope-Tribune; A. W. Church, 30-35-horsepower Decauville; C. W. Kelsey, 16-horsepower Maxwell; E. H. Cutler, 14-15-horsepower Knox; R. E. Olds, 16-horsepower Reo; R. M. Owen, 16-horsepower Reo; J. D. Maxwell, 8-horsepower Maxwell; Ralph Coburn, 16-horsepower Maxwell.

The last day's run on the return trip was not only the longest, covering a distance of approximately 150 miles, but was also one of the hardest owing to the steep, narrow, rough and tortuous nature of the roads between Poughkeepsie and Peekskill and the clouds of dust raised. Added to these conditions was a tiresome wait at Yonkers by the early arrivals for the more leisurely tourists to get in, so that as many as possible might run into New York City in a string. Fortunately the weather was ideal for touring, bright but with occasional clouds, and cool, with a light northwest breeze blowing.

Friday night had been spent at the Aspinwall Hotel in Lenox, Mass., a change having been made in the route, as better accommodations were to be secured in Lenox than in Pittsfield, five miles north. So Pittsfield was left entirely off the route. A large number of the tourists secured early starts Saturday morning, at 6 a. m. or as soon thereafter as possible. The spirits and good nature of the participants ran high with the ozone in the fresh morning air and the knowledge that they were on the home stretch. So they were in mood to enjoy the beauties of the fashionable summer resort of Lenox, with its beautifully trimmed lawns, well pruned foliage trees, palatial residences, mountainous scenery and superior macadamized roads. The Berkshire Hills, in the heart of which Lenox is located, are famed for their natural beauty and the ex-

cellent roads through them. They were a revelation to such of the tourists as had never before toured there.

An incident that happened early in the day showed one of the most unexpected dangers of touring in parties and especially of fast driving. Leaving Lakeville, thirty-three miles from Lenox, C. W. Kelsey overtook Augustus Post in his White and followed along behind for some distance, gradually closing the space between the cars. On a short descent, with a fork and right hand turn near the bottom, the speed became high and the overtaking machine was within fifty feet of Mr. Post's car when the latter made the turn onto the right fork and slowed down almost to a stop, at the same time running wide on the turn in such way as to prevent Kelsey from passing on either side without running off the road. The brakes were applied promptly, but it was impossible to arrest the momentum sufficiently to bring the gasoline car to a stop within the necessary distance. Kelsey steered left to the outside of the turn enough to clear the steamer, and in doing so ran off the edge of the road onto the grass, with a tree directly ahead. He succeeded in cutting a short enough turn to avoid hitting the front of the car against the tree, which was struck a glancing blow by the left rear mud guard. Fortunately, the car did not overturn, and was driven up onto the road again without stopping. The only harm done was the bending of the fender. At Yonkers Mr. Post afterward expressed regret over the occurrence, explaining that he supposed he had taken the wrong turn and that Kelsey would continue on straight instead of making the same turn.

Another incident of less serious aspect and having a semi-humorous side occurred south of Fishkill. While driving along a narrow earth road with bushes on either side, Kelsey met a man driving a single horse hitched to a light wagon that was empty. Each pulled out to his proper side of the road sufficiently to clear the other, but just as the automobile came opposite to the wagon the front wheels struck a large

stone that had not been noticed, and the impact threw the front end of the car a few inches over to the left, just enough to cause the left front wheel fender to catch under one of the back spokes of the rear wheel of the wagon. This lifted the wheel about fifteen inches off of the road, and set it spinning like a flywheel. The jolt pitched the driver off the seat on the opposite side of the road, but luckily he landed on his feet and was able to catch the seat as it came down and pull it back into place. The horse did not attempt to run away, and Kelsey, who had set the brakes to stop, seeing that no harm had been done, proceeded on his way. The driver of the wagon, evidently not knowing the real cause of the affair, looked angry but said nothing.

Although the route for the day followed the Hudson River from Poughkeepsie all the way down to New York City, it was only at Fishkill that the tourists got a really good view of the majestic river, with Newburg on the opposite side and Storm King Mountain towering above the river. Most of the way the road was so far back from the edge of the canyon through which the river runs and was bordered by such heavy woods that all view of the water was shut off. The roads and roadside scenery throughout the day were most interesting, constantly changing in character, sometimes being excellent macadam roadway with wide surface and easy sweeping curves, as that winding through a deep, shady and cool ravine at Garrisons, with a grand private estate on one side, and again, as on

the two-mile stretch intervening between that road, where it goes down to Highlands Station on the very edge of the river, and Peekskill, which was the roughest, narrowest and crookedest sort of uphill and downhill mountain road, with many big thank-you-ma'ams and almost as difficult to negotiate as the descent of Mount Agassiz on the first day out from Bretton Woods.

As far as can be ascertained, no accidents occurred on this bad piece of going, but a telegram received by the officials upon arrival in New York from H. W. Whipple, reported that Mrs. Whipple had been thrown out of the front seat of the Peerless touring car that her husband was driving by a double jounce caused by two thank-you-ma'ams coming unexpectedly in quick succession. It was learned later that as she fell she struck on her head, but examination by a physician in Sharon showed that she was not much injured beyond the shock. Mr. Whipple stayed behind to bring Mrs. Whipple into the city by train, sending his car ahead in charge of his chauffeur in an attempt to have it finish the tour within the official time.

Another curious accident of the day, due to road conditions, happened to J. D. Maxwell, driving his 8-horsepower Maxwell runabout, the smallest and lowest powered machine in the tour. Four miles from Sharon he was overtaken by W. C. Temple in his big 40-horsepower Pierce Great Arrow. Mr. Temple's chauffeur, who was driving, blew his horn and Maxwell obligingly gave him half the road to pass—a favor,

by the way, not always extended by Mr. Temple's chauffeur to others in the tour. When Mr. Maxwell pulled out he was at the top of a slight grade and did not notice that the planking over a culvert at the bottom was very narrow, as its ends were concealed by tall grass. The Pierce crossed without trouble, but the runabout was crowded so much that its two right hand wheels ran off the planking and dropped into the culvert. The front wheel caught against the bank and brought the little car to a sudden stop, bending the axle several inches out of line from the spring block. The same shock also turned up the rear spring shackle on the left side. Neither Mr. Maxwell nor his companion, J. Ross, was thrown out or hurt, but after that the runabout steered badly until another accident strangely corrected the fault.

The second accident, which was much less serious, occurred on the road leading out of Poughkeepsie. Workmen were making a new macadam road alongside of a trolley line, and the only place where vehicles could get through was over the ties of the street railroad. The rails projected their full height above the ties and road surface and the left wheel of the runabout refused to mount the rail, the shock bending the spindle just enough so that afterward there was no difficulty about steering. But it was a cross-eyed looking runabout that ran into New York that evening.

Another event that added to the day's unusually large chapter of troubles was the grinding up of a cone and the balls in one



ARRIVAL OF THE TOURISTS AT THE PLAZA, NEW YORK CITY, UPON COMPLETION OF THE FIRST GLIDDEN TOUR.
(Central Park in the Background.)



ALBERT L. POPE'S 45 H.P. POPE-TOLEDO TOURING CAR IN THE GLIDDEN TOUR.

of the wheel bearings on W. C. Temple's car. At first it was reported that the wheel had broken or come off, but this was denied by the driver upon inquiry at Yonkers. The injury to the bearing, however, caused the rear right wheel to wobble badly, and to remove as much weight as possible from the axle Mr. and Mrs. Temple finished the journey by train, Mr. Post having taken them in his car to Garrisons, where they had dinner together. The machine arrived in Yonkers at 2:30 P. M.

The first arrivals at Yonkers were Walter C. White and W. N. Epping, both in White steamers, who passed through at 1:12 P. M., without waiting to come into New York with the rest. E. A. Gilmore was third, at 12:20, in his Rambler; E. H. Woods fourth in his Napier; A. W. Church fifth in his Decauville; J. D. Maxwell sixth in his runabout at 1 o'clock; C. W. Kelsey seventh in the 16-horsepower Maxwell, at 1:12; G. O. Draper eighth in the 22-horsepower Packard single-seat car, at 1:33 P. M.; R. M. Owen ninth, at 1:34, in his Reo; Albert L. Pope's 45-horsepower Pope-Toledo tenth, at 1:40, and S. B. Stevens eleventh in his 15-20-horsepower Darracq. Harold Pope, who finished at 2:30 P. M. simultaneously with Mr. Temple's car, had a broken fender rod on his Pope-Tribune and a small leak in the gasoline tank.

Percy Pierce, Augustus Post, R. L. Morrell, Julius Mehlig, Ralph Coburn and one or two others who consistently stuck to a moderate touring pace throughout the contest arrived after 3:30 at Yonkers.

Harlan Whipple's car reached New York after the closing hour of the control, J. C. Kerrison finished late, but inside the time limit, and C. J. Edwards reached New York among the tailenders, despite the damage to his steering gear caused by the upsetting of his big car on the bridge at Conway on the last day of the up trip.

Mrs. Cuneo was among the unfortunate ones who did not finish inside the time

limit, owing to serious engine trouble that developed on Friday's run from Worcester to Lenox and prevented her reaching the Aspinwall Hotel until 2 o'clock Saturday morning.

Only four cars of the thirty-two that started from New York actually failed to finish, and of these one was withdrawn because of the illness of Mrs. Hugh Thomas, and another because William A. Lamson wished to remain behind and tour longer in eastern Massachusetts. The only cars put out of the tour by mechanical troubles were Sydney Hutchinson's 50-horsepower Panhard and Mrs. J. N. Cuneo's White steamer.

Worcester to Lenox.

A few minutes before 9 o'clock Friday morning, July 21, the six tourists upon whom summonses had been served the night before walked over from the Bay State House to the District Court building and ascended to Judge Utley's courtroom, accompanied by about twenty-five other tourists. After two "drunks" had been disposed of quickly, the names of Carl Page, W. C. Temple E. H. Fitch, R. E. Olds, R. L. Morrell and Mrs. J. N. Cuneo were called by the clerk, and the "convicts" stood up before the rail and were sworn. The charge was read, and Attorney Daniel Gay, of Worcester, made a plea for clemency in an undertone that few could hear. He called the court's attention to the fact that the visitors were guests of the state and the city of Worcester, and for that reason were entitled to especial consideration, particularly since they were unfamiliar with the local regulations and were given no warning to slow down when entering the city.

His arguments carried no weight with the court, whose mind evidently had been made up before the convening of court. The judge said, in part:

"I don't recognize any difference between these people and anybody else. They are

not my guests. They come here, knowing the law, and they must obey it. They come through here flaunting their wealth and defying the honest citizens of the town that makes the complaint. I am not interested in selling automobiles or in racing them. If these people want to race, let them go elsewhere. If they want to come to Massachusetts they must behave themselves and obey the law. Unless they do the legislature will restore the jail sentence for speeding on the streets, which it unwisely, in my opinion, recently removed. Some of these people here ought to be in jail, I think. Fifteen dollars each."

The fines were paid without protest, as the tourists were anxious to get started on the day's trip, and, believing that the court was prejudiced, realized the futility of arguing the case and requiring proof of the transgression of the law. Two of the persons for whom summonses had been prepared were not present. They were C. J. Edwards, who had been unable to keep up with the body of the tourists because of the damage done to his steering gear by the accident at the bridge in Conway, and Benjamin Briscoe, who had quit the tour at Hartford on the first day, and was not driving his car when it passed through Leicester.

Long before the visit to court the tourists' cars had been lined up in front of the Bay State House, close together, with backs to the curb, ready for a start as soon as the cases were disposed of. When the "convicts" and their friends put in their appearance there was a great tooting of automobile horns and of paper fish horns that had been thrown into every car. Each machine also had its lamps draped with black crepe.

Quickly the machines departed, moving slowly in line through the streets to the Worcester limits, where a band of a dozen pieces that had been hired for the occasion was in waiting. Each man of the band was given a seat in a car, and the procession moved on to the Leicester Inn, where the band dismounted and walked ahead, playing funeral marches, "There Are Fifteen Dollars in My Inside Pocket," "Over the Hills to the Poorhouse" and other dismal airs in slow time, while the cars followed behind three abreast, moving as slowly as the band marched. In front of a shop where Constable Quinn, who set the trap for the tourists, and took evident delight in serving the warrants, works, when not trapping autoists or refereeing cock fights, the band came to a halt and played "Auld Lang Syne," while the passengers in the thirty cars removed their hats and joined in the chorus.

Hundreds of the townspeople looked on at the unusual sight and laughed at the implied odium heaped upon the heads of the officials responsible for the "hold-up." The constable, however, declined to be enticed from his retreat, wherever it was, and the band was dismissed, the crepe torn from the cars and scattered on the street as souvenirs of the last visit that an organized tour or endurance run will ever make to Leicester or Worcester county. Then, with

a last derisive tooting of horns, the automobilists drove on to the town limits, pushed in their high gears and soon forgot Leicester in the enjoyment of a brisk but dusty ride through the cool morning air through Spencer and East Brookfield, past pretty Lake Wickaboag to West Warren.

From Warren, through Palmer and North Wilbraham to Springfield the roads were the worst on the 240-mile course between Boston and New York, being narrow, winding, very sandy and having deep ruts, with trees and low brush bordering the road so closely in some places that to pass another vehicle was almost impossible. A large number of cars were stopped at Springfield, where their passengers took luncheon at noon, the start from Worcester having been made at 9.25 A.M., and the parade through Leicester having occupied the better part of an hour.

From Worcester to Springfield the return course coincided with the route of Wednesday of the preceding week, or the second day of the tour out of New York. At Springfield it struck off westwardly, and soon after passing Westfield the tourists entered the Berkshire Hills section, and began again to enjoy the beauties of mountain scenery. From Westfield to Huntington they skirted the south bank of a branch of the Connecticut river on an excellent macadamized state road, the only drawback to the full enjoyment of which was the fact that a new interurban electric railroad was under construction all the way on the left side of the road, a distance of thirteen miles. Teams and building material and rocks that were being removed from the roadbed made driving somewhat annoying. From Huntington the road became sandy, and near Chester this changed to a mountain earth road, which became metamorphosed into a wide and hard macadam road for two miles, leading into Chester and for several miles beyond.

Near West Becket another joke was played upon the unsuspecting contestants by the tour committee. The guide book said, "Climb Morey Hill (1,846 feet elevation), passing Becket P. O., and descend to West Becket." Few suspected the full meaning of these simple instructions, but they found them sufficiently difficult to fulfill, since in places the grade was more than 25 per cent., with an ordinary dirt surface, rough and loose, and frequent thank-you-ma'ams. The worst of it was that Mr. Glidden had posted himself on the very steepest pitch, half way up the hill to make observations for the use of the committee in deciding the awarding of the trophy. A press photographer had also planted himself on the hill to make permanent and indisputable records of cars that had to be pushed up the hill by their passengers or hauled up by a team that a farmer with an eye open to business had stationed at the base of the ascent.

When the car in which the writer was a passenger began to climb the grade the en-

gine slowed down, and Kelsey, instantly guessing the reason and rising to the emergency, called to his assistant to "blow in the tank." While the assistant was lifting the front seat cushion and unscrewing the gasoline tank cap the car came to a momentary stop, but as soon as the gasoline was forced into the carburetor under the pressure of the air blown into the tank the engine began to pull again, and had no further difficulty in pulling the carload of four persons and four suitcases up the rest of the grade on low gear in short time.

There was no heating of the engine or boiling of the water on this or any other hill, including Mount Washington, which was climbed three times by the same double-opposed cylinder car. In fact, no water was added to that in the radiator throughout the trip nor before Kelsey, after finishing the tour at New York on the following night, started to drive on to Philadelphia without waiting to eat supper, making a total run for the day of nearly 250 miles. Though the engine is of the slow-speed type, developing its maximum power at a normal speed of 800 revolutions, it frequently on the trip turned up to 1,200 or more. Natural or thermo-syphon circulation is depended upon to keep the cylinders cool.

The necessity for blowing into the gasoline tank arose from the fact that about half the fuel in the tank had been used during the eighty-eight-mile run from Worcester to Morey Hill, and when the car got on the incline the liquid would not flow into the carburetor.

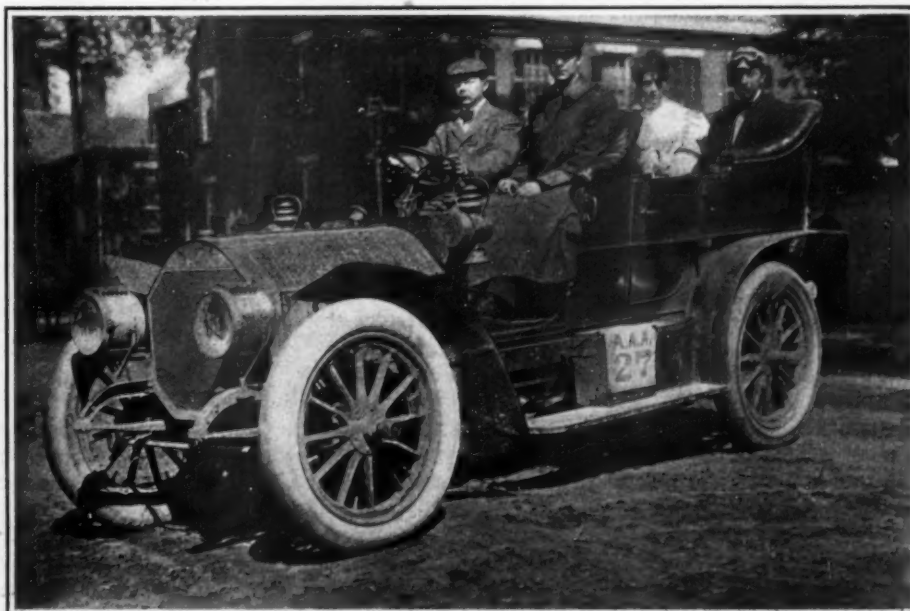
What difficulties others had on the hill we could not wait to see, but learned later that the light Cadillac touring car and the 18-horsepower Napier two-passenger car were helped up, and that the Pope-Hartford 18-horsepower car backed part of the way up. It was stated that evening

at the Aspinwall Hotel in Lenox that it was unprecedented for so many cars to make the ascent of this particular hill with so little difficulty.

The grand view of the surrounding mountain country from the top of the hill repaid the hard work of getting up, but no sooner were the cars on the crest than they began another of the long, steep, winding and bumpy descents through the woods to West Becket. A couple of miles farther on Greenwater Pond was passed on its northern bank, and then from East Lee to Lenox there were five or six miles of excellent macadam state road.

The Napier and the three Pope cars were the first to reach the destination of the day's journey at the Aspinwall, but they had left Worcester at five or six minutes after 6 o'clock in the morning, instead of waiting with the others for the disposal of the cases against their fellow travelers. The elder Mr. Pierce took Albert L. Pope to task in a friendly way at the hotel in the evening, asking why he "shook the bunch at Worcester." E. H. Cutler, who was the fourth arrival with his Knox, finished at 2.48 P.M., closely followed by S. B. Stevens, Darracq, at 2.52; C. W. Kelsey, Maxwell, at 2.56; Walter White, White, J. D. Maxwell, Maxwell, the Packard truck, at 4.15; G. O. Draper, Packard, at 4.38, and Temple. Pierce and Post, almost together, at 5.15. Church finished on the Decauville at 5.30, with the radiator steaming, the front wheel wobbling because of a slightly bent spindle, a Weed tire chain on the left driving wheel badly worn and the tread of the tire cut to pieces by the links. The tire chain had not been needed on Thursday and Friday, and would better have been removed.

At midnight, C. J. Edwards reached the hotel, having driven his big 24-h.p. Cadillac No. 9, that had upset on the Conway bridge, 250 miles from Plymouth to Lenox since



ROBERT L. MORRELL, CHAIRMAN A. A. A. RACING BOARD, DRIVING LOCOMOBILE NO. 27.

morning. He had been laid up at Plymouth on the first day out from Bretton Woods with a broken steering gear.

Sydney Hutchinson was unable to finish the day's run with his 50-h.p. Panhard, having broken the crankshaft. Mrs. Cuneo also failed to finish within the time limit, her engine having quit business twenty miles out as a result of the damage done on the first day out of New York, when it ran into a creek at Greenwich and capsized.

Concord to Worcester.

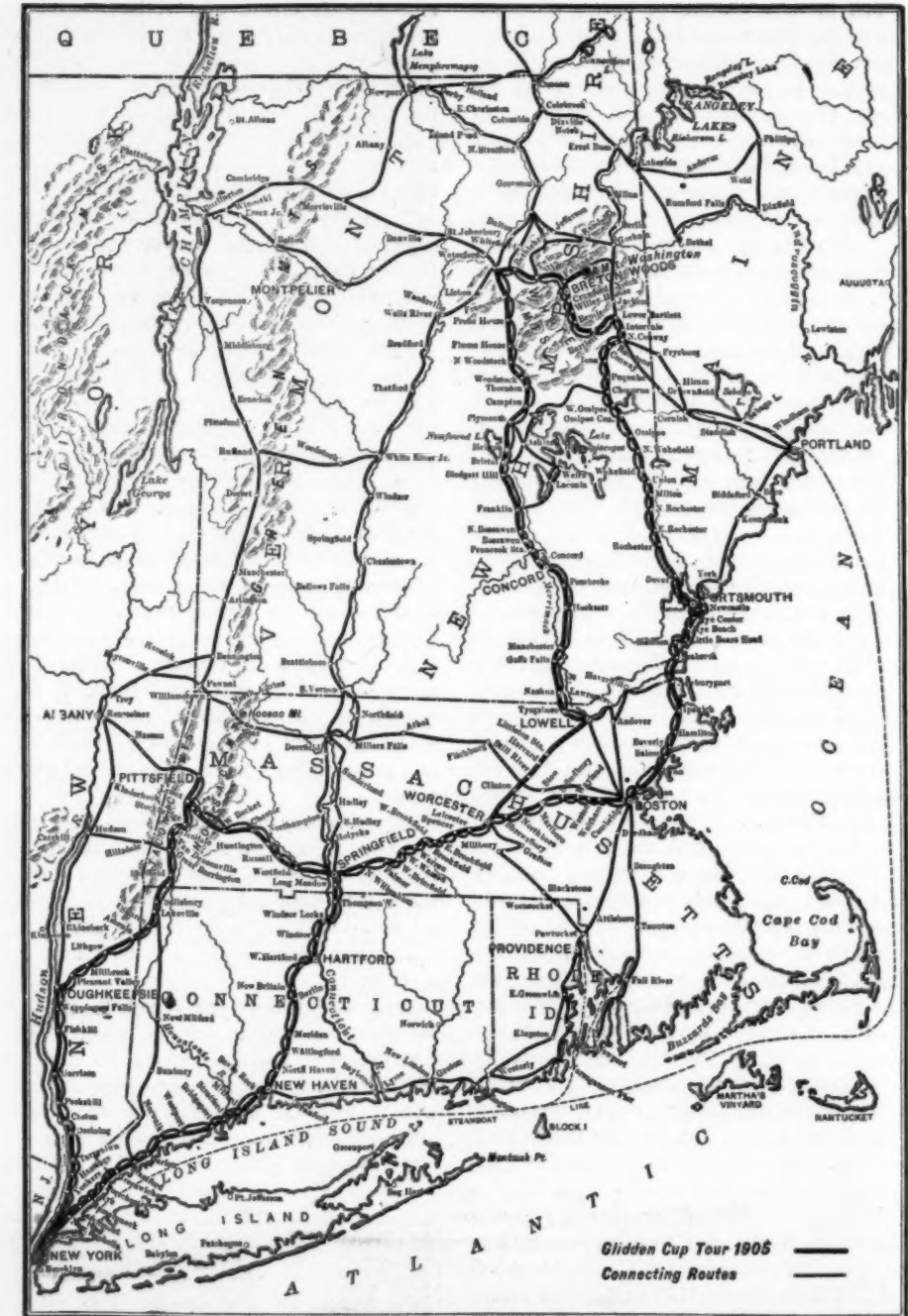
Thursday's run (July 20) of 99 miles culminated in the arrest of six of the tourists at the Bay State House in Worcester upon warrants issued last week for exceeding the speed limit in Leicester on the up trip. The summonses to court were served in the rooms of the Worcester Automobile Club upon Carl H. Page, W. C. Temple, Mrs. J. N. Cuneo, R. E. Olds, E. H. Fitch and R. L. Morrell. A star chamber session was held by Constable Quinn and the "convicts," as they were promptly dubbed by the other tourists, with Mr. Glidden and Post, of the touring committee, and council present. It was held from 6 to 7 o'clock, and bonds were given for appearance in the district court of the county at 9 A. M. Friday.

The intended service was the overshadowing topic of interest during the afternoon following the arrival of the autoists in Worcester. And after the summonses were served the matter continued to be discussed and means planned for partially evening the score with Leicester.

A foretaste of Friday morning's proceedings was had by George O. Draper, who finished Thursday's run first in his 22-horsepower Packard at 9:47 A. M., and was arrested by a bicycle policeman and taken at once to court, where a fine of \$15 was imposed and paid. Later a policeman was posted on the road over which the tourists entered the city to warn them to drive slowly, as had been done by the Worcester officials on the upward trip.

Before going to bed the Glidden party agreed to wait for the end of the court proceedings in the morning, when all should start together, and, headed by a band on foot playing funeral marches, and with cars draped in mourning, should loaf through Leicester to express their ideas of the city's attitude toward the guests of the largest city of the county.

The day's run was through Manchester, Nashua, Littleton and Clinton to Worcester. The roads were mainly sandy, with some excellent stretches of macadam, notably at Lowell, Harvard, and entering Worcester. There was not much difficulty in following the route, although a number kept on the left side of the Merrimac river and ran into Manchester instead of crossing to the west side of the river and into West Manchester. And in Manchester some smart Yankee garage keeper had scattered con-



From Official Program of "Climb to the Clouds."

MAP OF 1905 GLIDDEN CUP TOUR, SHOWING RAILROADS AND CONNECTING ROUTES.

fetti from the main street down a side street to his garage, and so misled a number of tourists, who lost time and temper in turning around and getting back into the main street.

Lowell proved a hard place to find the way through quickly, owing to its narrow streets, the frequent irregular angles to be turned and the difficulty of locating the postoffice, a prominent landmark given in the guide book, but obscurely located in the city.

Many places between towns the roads were very narrow and wound sharply through trees and shrubbery, making the passing of teams most dangerous. It was in such a place that a collision occurred be-

tween E. H. Cutler's Knox car and a wagon load of lumber. The wagon pulled out to the left, leaving barely room to pass on the right between the wagon and a row of trees. A. E. Denison was driving, and the road surface was sandy. When the car was about a length from the wagon and running slowly, the rear wheels skidded to the right, and before Denison could get it straightened out the corner of the hood struck the overhanging rear of the lumber load. The impact crumpled up the light bonnet and pushed back the dashboard, catching the driver's foot as it was thrusting forward on the brake pedal, so as to dislocate a joint of one toe and break one of the bones. Mr. Cutler also had his foot

caught under the edge of the generator on the dash and severely pinched.

Denison was taken to a doctor, who put his foot in a plaster cast, and then the man pluckily drove the car the rest of the way into Worcester. No harm was done to the car save the bending the hood and breaking of the dash; the engine did not even stop running after the collision, as none of the batteries and wires carried under the bonnet was broken, and the car has no radiator to damage.

The only other mishap of the day was the running away of a team hitched to a mowing machine when one of the cars passed. The driver was pitched off the seat and seriously injured, while the machine was badly broken.

The weather was perfect, coming after the hot weather of the first of the week and the deluge of Wednesday.

The order of the early arrivals was G. O. Draper, Packard 22-horsepower, first at 9:47 A. M.; Walter White, 15-horsepower White, second; S. B. Stevens, 15-20-horsepower Darracq, third; Edward H. Woods, 18-horsepower Napier, fourth at 10:08; J. D. Maxwell, 8-horsepower Maxwell, fifth at 10:10; C. W. Kelsey, 16-horsepower Maxwell, sixth; George H. Tyrrell, 15-horsepower White, seventh; Mrs. Cuneo, 15-horsepower White, eighth at 10:58. The Knox truck arrived at 2:10 P. M.

E. B. Gallaher arrived at 11:50, accompanied by his mother on the single seat of his stripped 50-horsepower Richard-Brasier that took part in the Climb to the Clouds on Tuesday. E. C. Bald also registered at the hotel, having driven a Columbia from Bretton Woods down through Boston to Worcester.

A pleasant diversion was provided for the tourists following the second day's run on the return trip that ended at Wor-

cester. At the Bay State House the participants were handed reserved seat tickets for the evening at the Franklin Square Theatre, provided by courtesy of the Worcester Automobile Club, and a large number attended the play "All on Account of Eliza." The fun presented in the play was much enjoyed, as were also a number of jokes having especial application to the tourists that were read between the acts by Mr. Williams, who played the principal part in the character of Franz Hockstuh.

Mr. Glidden took the opportunity between the acts to make a brief address to the audience in connection with the arrests of half a dozen of the tourists made by the constable of Leicester. He concluded by reading a statement that he had handed out to the press earlier in the evening. In this he called attention to the fact that the persons arrested were law abiding residents of other States who were competing for a trophy given with the object of encouraging motoring for health and recreation under such favorable conditions that both ladies and gentlemen might participate. He stated that without having been given friendly warning such as had been courteously given by the police of Worcester upon their entry into that city, they had been drawn into a police trap set at a point where a short burst of speed for a distance of less than 300 feet would be certain, if anywhere in the city, because of the approach at that place to an up grade that all would naturally want to ascend without changing gears. He said that the tourists had been invited to visit Massachusetts by some of its leading citizens and were, therefore, the guests of the people and should have been treated as such, in stead of, for the first time in their lives, being branded throughout the country as law breakers and criminals.

Bretton Woods to Concord.

Dangerous mountain roads and a heavy wind, rain and electrical storm combined to make the first day's run on the return from Bretton Woods to New York by far the worst of the tour.

Many accidents were feared as the run progressed and the sun made the roads muddier and more dangerous for those who started late or ran so slowly as to be overtaken by the storm when only a short distance on the way, and be followed by it down the valley of the Pemigewasset River all the way to Bristol, seventy miles. Almost miraculously, nothing of a serious nature happened, and by 8 P. M. all of the thirty cars that started from Bretton Woods in the morning had reported at the A. A. A. headquarters in the Eagle Hotel in Bristol. There were innumerable small troubles, however, nearly all occasioned by the wet, hilly roads, where traction could not be secured by many cars whose wheels were not fitted with chains, and on the long, steep down grades of which others burned out their brakes or skidded dangerously.

The distance covered during the day was 103 miles, the route being through Bethlehem, Franconia, Plymouth, Bristol, Franklin and Penacook to Concord.

Trouble came early in the day, the descent of Mount Agassiz into Franconia by an almost precipitous road that was so narrow that two machines could not pass, very tortuous, with frequent thank-you-ma'ams and completely overarched with trees, presenting one of the most difficult and dangerous mile stretches of road that most of the tourists had ever seen. At a turn near the middle of this a farmer driving a light single-horse wagon containing a can of milk for market met the first of the tourists coming down, and his horse promptly reared and backed the wagon over a pile of logs. The farmer took him out of the thills and stood with him by the roadside under the trees, patiently and with rare good nature waiting for the following cars to pass. His presence, however, generally held up the cars in bunches, while passengers ran ahead to learn the trouble and offer assistance.

It was a descent that was hard on brakes and a number of drivers threw in the clutch and braked on the compression of the engine. Kelsey, who had climbed Mount Washington several times in his Glidden tour car on Monday and Tuesday, pronounced the descent of Mount Agassiz a worse one than that of the famous Mount Washington road.

After the difficulties of that stretch of bad road, the excellent and most beautiful macadam road extending for miles beyond Franconia past Echo Lake, Old Man of the Mountains and through Franconia Notch was all the more appreciated and enjoyed. All the way the road was overarched with fine big trees, and was bordered on one side or the other by lake or river, with frequent vistas of the towering mountains that close it in. Scenically the run nearly all the



THE ONLY RUNABOUT IN THE GLIDDEN TOUR—8-H.P. MAXWELL.

way to Concord was the finest and most interesting of the whole tour, and Nature's beauties in the form of majestic mountains towering one after another in all directions for fifty miles were most impressive. The tumult of mountains vanishing into the dim distance and curtained thinly with bluish gray vapor bore a most striking resemblance to a storm-tossed sea—an impression further accentuated by the swaying and pitching of the "pike yachts" as they negotiated the rutty sand roads that were traversed most of the day when they did not change to muddy pitches up and down the sides of the mountains.

That these scenes should be blotted out by one of the frequent violent summer storms common to mountain districts must be counted as "all in the automobilists' luck," and as such it was taken good naturedly and without murmur, even by such passengers as, lacking experience in such affairs, had not provided themselves with adequate rubber garments as a protection against it. Very few of the cars stopped during the first and heaviest of the rain, and all who did not ride in covered cars or did not wear rubber trousers or cloaks soon became soaked from the water running onto the seats as well as driving into their faces. It was a deluge from which none escaped, except the lucky few who started first promptly at 6 A. M., and even these were overtaken by a dusty wind storm though they outran the worst of the rain, for the storm spent its force before it reached Franklyn. Many caught the full effect of the storm while skirting the east shore of beautiful New Found Lake.

The hardest bit of uphill work of the day was just below Franconia, on the famous three-mile mountain climb to Profile House. It was there that many drivers stopped to put on tire chains. Near the foot of the climb Kelsey, in whose fine little hill-climbing 16-horsepower Maxwell the writer was one of three passengers, passed the Packard baggage truck which had started in the middle of the night, and Mrs. Cuneo's party, on whose White car the pump had been broken on the up trip to Mount Washington. At times during the day half a dozen cars were stalled on that particular grade.

One of the most pleasurable features of the day was the great interest taken in the tour by the farmers and townspeople along the route. At almost every house the inhabitants were out in front to cheer or salute the automobilists with a well-wishing smile as they rushed past. Some had decorated their houses and fenceposts with flags, and at one place, near Plymouth, a farmer's family had gathered a number of local musicians, and as each car passed they saluted it with a bass drum, a cornet and other instruments, while the women folk waved flags. At this or some similar place pond lilies were tossed into the cars as they passed. Guests at most of the summer resort hotels also gathered on the great verandas to watch the unusual sight of forty

automobiles pass over the New Hampshire road in the day, for a number of other tourists kept the Gliddenites company.

Another evidence of the good will of the New Hampshire farmer and of his desire to keep abreast of the progress of the century was the number of horses tied or held close to the road along the way to get them accustomed to automobiles. Most of the animals showed an unexpected composure, and only in two or three cases were there any threatened runaways.

The last eight miles of the run into Concord was over a fine new macadam road skirting the trolley line from Penacook, and fast time was made over it, as the unfriendly spirit manifested so pronouncedly in Leicester, Mass., and Dover, N. H., on the way up was noticeably absent, no police traps or officers being in evidence. Early arrivals got into Concord between 1 and 2 o'clock, the first being E. H. Cutler and C. R. Culver, in Knox No. 35, which had started fourth from Bretton Woods at 6 A. M., having covered the 103 miles of most difficult going in seven hours. Other early arrivals were C. H. Walker, in the Pope-Hartford 18-horsepower; George H. Tyrrell, in White steamer No. 39; J. D. Maxwell, in his 8-horsepower Maxwell runabout; F. Offenhauser, in Benjamin Briscoe's 16-horsepower Maxwell; Harold L. Pope, in the 12-horsepower Pope-Tribune; E. H. Woods, in the 18-horsepower two-passenger Napier (the first American-built Napier), and C. W. Kelsey, in his 16-horsepower Maxwell. Kelsey, who started at 7:15, finished at 1:45, his running time, deducting a thirty-minute stop at Bristol for the storm to abate, being six hours. By 2 P. M. twenty-eight of the cars had finished, all more or less covered with mud and with passengers wet and weary, and by 6 o'clock the touring cars were all in and the two trucks close to the city.

The good fellowship and democracy of the automobilists was never better exhibited than at Concord, where the earlier arrivals sat on the steps of the Eagle Hotel discussing the events of the days and awaiting the incoming of the later ones. Among these were Charles J. Glidden, who is following the tour all the way by train, as he was unable to get his car to America in time to join the tourists; George N. Pierce, Arthur and Albert Pope, S. B. Stevens, Charles Otis Draper, E. H. Cutler and others well known in the sport and trade.

Most of the arrivals had stories to tell of skidding or mechanical or tire troubles. The baggage trucks were objects of especial interest in view of the difficult nature of the course and their comparative unwieldiness. Despite their troubles, they both got in during the evening—the Knox about dark and the Packard, which carried the largest load, after supper.

Sydney Hutchinson arrived in his big 50-horsepower Panhard about 4:30 P. M. with a party of five and much luggage, and reported having had much trouble in the soft

earth on the hills, where in several places his wheels dug deep holes in the road that Mr. Hutchinson thought would make trouble for following cars. He passed the Packard truck many miles back, descending a long hill and holding back about a dozen other cars.

Kerrison, of Boston, who is accompanied by his wife and little daughter, did not finish until about 6 o'clock, having had to "jump" his little Cadillac car up some of the worst hills by racing the engine and then quickly throwing in the clutch. Some of the steepest pitches on the hills measured by the gradometer 25 and 27 per cent. grades.

Hilliard and Mitchell drove up in the Napier that won the Climb to the Clouds in the record time of 20:58 2-5 seconds at 4:30, and a few minutes later E. B. Gallaher brought the Richard-Brasier hill-climbing machine in, his mother occupying the seat by his side, the car being stripped of the tonneau.

S. B. Stevens arrived at 2 P. M. with his 15-20-horsepower Darracq, stripped of its rear seats.

Another stripped foreign car—the big Deauville that was entered in the climb—had much trouble with its tire chains slipping off and by its left driving chain jumping the sprocket. The chain was quickly replaced by loosening the strut rod and slipping it over the sprockets.

Among the "outside" automobilists that pulled into Concord Wednesday evening were A. E. Morrison, who made the remarkable time up Mount Washington in a Peerless last year, and who had just driven up from Boston to Plymouth with a party in a Peerless to meet the tourists.

Although caught in the heavy shower, Mr. and Mrs. E. H. Fitch and their little girl finished at 5:05, looking fresh and comfortable, as the Fitches, like the Pierces and Temples, were making the journey leisurely in commodious cars of long wheelbase, fitted with Cape Cart hoods.

H. W. Whipple, with Mrs. Whipple and friends, came in at 5:58 o'clock in his 35-horsepower Peerless, having been delayed one and a half hours by a troublesome fan belt and another hour by tire trouble.

Concord was the most deceptive place on the whole run in the matter of public sentiment toward automobiles. When the tourists rolled into the city early in the afternoon it looked like a city whose inhabitants had suddenly and simultaneously disappeared. But in the evening the appearance was utterly changed, and the tourists were given the greatest popular reception received anywhere along their 600 miles of touring. After supper a brass band serenaded the automobilists from the public square in front of the Eagle Hotel, which was headquarters for the tourists.

Apparently all the able residents of Concord congregated in the broad street between the hotel and the square, to the number of probably 5,000, listening to the music

and watching with excited interest the large cars moving about the street. It was a real gala occasion, and the reception was so much appreciated that when there were calls for a speech from Mr. Glidden he responded, thanking the townspeople for the courtesy shown the visitors, and expressing the hope that the tourists might visit Concord next year.

The attitude of the local authorities toward the tourists was in striking contrast with that of the police of Leicester and of Dover. Instead of laying police traps to catch the unwary, the police were not to be seen at all on the fine eight-mile stretch of boulevard leading into the city, but as soon as the cars began arriving at the hotel and garage officers were plentiful enough there, and kept the hundreds of inquisitive small boys from getting in the way of the tour-machines.



GLIDDEN TOURISTS LEAVING THE MAGNIFICENT MT. WASHINGTON HOTEL AT BRETTON WOODS IN THE WHITE MOUNTAINS.

The crowd in the street did not disperse until a late hour, when the visitors sought their rooms, weary from the day's run and anxious to get an early start on the morrow.

Prince Henry of Prussia will drive a 40-horsepower Benz car in the Herkomer Touring Competition, his number being 7. H. R. H. will start in the third class for cars from 32 to 60 horsepower. The close of entries has proved a total of ninety-six, which are divided as follows: four cars of from 100 to 60 horsepower, 39 of from 60 to 32, forty-six from 32 to 16, and seven from 16 to 12 horsepower. The Bleich-roader speed events have only seven entrants to date, but these range from 70 to 130 horsepower, and consist of two Gordon Bennett Mercedes, a Vienna Daimler, a Fiat, a De Dietrich, a Buggatti and a Dufaux, while a Brasier with Théry up, is promised. Besides this, fifty entries have been received for the motorcycle events.

UNTIL the official records are in there is no possibility of recording anything like a complete account of the mechanical troubles encountered by the tourists. Such an account is of the greatest importance to the builder and user, showing the one where improvements or modifications of construction are desirable, and giving to the other a knowledge of what to look out for in the correct operation of existing machines.

W. C. Temple, of Pittsburg, driving a Pierce Great Arrow, reported that his engine troubles during the tour consisted of one disabled spark plug, in which the porcelain had cracked. The plugs had to be cleaned, having sooted. On the last day

the cone and balls in one wheel bearing ground up.

Harlan W. Whipple, driving a 35-horsepower Peerless, said that he had been obliged to have his spark plugs cleaned and to tighten his brake bands. Trouble with the car's sparking system which had proven annoying during the early part of the run was remedied by changing the spark coil and putting in a new one. A broken fan belt and tire troubles were also listed.

Augustus Post, driving a White steamer, stated that he had a clean record at Worcester. The car appeared to be in excellent condition with the exception of a slightly sprung rear axle.

Carl H. Page, one of the White steamer contingent, was pleased to be able to state that his car had met with absolutely no mishaps either to machinery or tires, and had a clean score. Apart from the ordinary adjustments attendant upon touring usage and the tightening of the mud guard bolts nothing was done to the machine.

By HARRY B. HAINES.

G. O. Draper, driving a Packard car, had nothing to report, except that his car had required no attention and was enjoying a clean record at Lenox.

A. W. Church, with a 35-horsepower Decauville car, had no end of trouble with the car heating up. During the parade at Leicester when the machines proceeded slowly behind a band the water boiled so violently that it spouted through the vent in the water tank cap in a stream to the height of five feet or more. The car also had tire troubles and slightly bent one of the front spindles.

Percy P. Pierce, driving a Pierce Arrow, made no replacements of parts or adjustments beyond those usually made on any car after a hard day's work, such as re-adjusting the coil vibrators. No tire troubles had been experienced.

Harold L. Pope, driving the Pope-Tribune car, reported a clean machinery schedule and one puncture.

Charles E. Walker, driving a Pope-Hartford, stated that the car had given no trouble and his only delays en route had been occasioned by two punctures.

A. L. Pope, with a Pope-Toledo, who made 6 o'clock starts throughout the tour, stated that the machine had given absolutely perfect service and had a clean record unmarred by either engine or tire troubles.

J. D. Maxwell, driving a Maxwell car, reported one puncture, a nail having been picked up in the rear tire. While in Bretton Woods a key in the differential came out and the replacement occupied several hours.

S. E. Hutchinson, of Philadelphia, driving a 50-horsepower Panhard, had very good luck and a clean record until near the end of the run, when he was delayed between Springfield and Lenox, Mass., by engine troubles the exact nature of which were not reported.

Mrs. J. Newton Cuneo, the daring woman driver of a White steamer, had a number of trying experiences. A broken water pump delayed her on one stage. Her car was ditched the first day out and badly shaken up. On the run from Worcester to Lenox, Mass., when about 20 miles from Lenox the driving shaft of the car was reported to have broken and assistance was sent out.

E. H. Woods, driving the first American Napier, experienced considerable trouble en route, but finished in good order. A broken strut rod was the most serious mishap.

Edward Gilmore, driving a Rambler, reported no trouble with tires and engine and no work on the car other than the adjusting of the brake bands.

Walter C. White, driving a White steamer, reported a clean record with the exception of ordinary touring adjustments.

R. L. Morrell, driving a Locomobile,

claimed an absolutely clean tire and engine record with the exception of the adjustment of the make-and-break on the sparking system.

S. B. Stevens, driving a Darracq, claimed a clean record.

R. E. Olds, driving a Reo, had an inner tube melt and had half an hour's delay caused by spark troubles, the result of a short circuited wire.

R. M. Owens, driving a Reo, claimed a clean machinery record on the run to Springfield, Mass. He was delayed by a rear tire blowing out. A messenger came to Springfield, and, securing a tire, returned with it to the disabled machine. Adjustments of the coil were required at Lenox.

E. H. Cutler, of Springfield, Mass., driving a Knox car, had two punctures and his car was slightly damaged by running into a lumber wagon.

A. A. Grout, with the new Grout four-cylinder gasoline car, was unable to get his car ready to start in time and attempted to follow the tourists and overtake them, but owing to unexpected machinery trouble was unable to do so.

G. H. Tyrrell, of New York city, driving a White steamer, was obliged to replace a high-pressure hose. He also experienced tire troubles.

C. W. Kelsey, driving a Maxwell car, broke a connecting rod, but experienced no other difficulty after making repairs.

No official report of accidents or breakdowns has been issued.

Condition of the Cars.

Although lacking the severe road and weather conditions of the Pittsburg and the St. Louis runs, the Glidden tour to the White Mountains has been a severe test on both men and cars, and has again demonstrated the fact that automobiles are machines of practical utility.

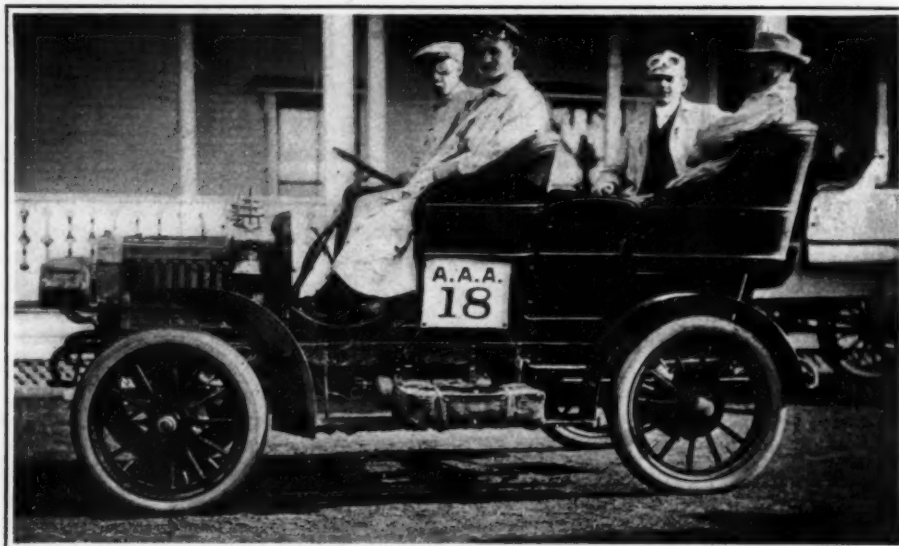
Despite the fact that they had covered 600 miles by the time they reached Worcester, the surviving cars were in excellent condition and, it is safe to say, could have been driven over the entire course again without repairs or part replacements of any consequence.

Looking over the machines after they had been washed up at the garage, no one would have thought that they had been up to Mount Washington from New York and Boston, and had negotiated the varying roads met with in that distance.

There was a surprising lack of sprung and bent axles, and the springs which had suffered so severely on previous runs seemed to be in good shape on all the machines.

The general trend of manufacturers toward strengthening these essential parts was evident and the result must have been gratifying to them.

The encasing of chains and engines had worked wonders for the tourists, and when the motors were started for the trip to Lenox the absence of that familiar grind-



MAXWELL 16-H.P. TOURING CAR ENTERED BY BENJAMIN BRISCOE, OF TARRYTOWN, N. Y.

ing of mud and dust in bearings was pleasantly missing. To this in a great extent the excellent condition of the cars was due.

It was noticeable at the garage that all of the drivers were particularly careful in going over their machines and making adjustments before starting, and in the cases of a number of the multiple-cylinder cars the sparking systems received particular attention, coils being tested and plugs cleaned. The main trouble met with seemed to be due to the very liberal use of oil, made necessary to keep the engines cool under the trying runs up mountain roads made dangerous and "skiddy" by a heavy rain on Wednesday.

When the motors were started on Friday morning (July 21) it was noticeable that the four-cylinder type had lost practically none of their smooth-running qualities, and had developed no connecting rod or bearing knocks. In some of the double-cylinder opposed cars slight connecting rod knocks were noticeable, but, on the whole, all of the engines were in remarkably good running order.

From the reports of drivers of the various cars it would seem that there had been very little engine trouble experienced by the survivors, and in many cases it was claimed that the machines had a clean record, all stops being ascribed to most anything but engine weakness or ignition troubles.

It is very probable that this was the exact situation, as all of the cars have been well-equipped with heavily insulated wire and every precaution possible taken against "sparking troubles."

In all of the cars the compression seemed to be remarkably good when the severe usage given the engines is considered. All of the drivers commented upon the fact that no grinding in of valves had been found necessary, and felt sure that this was due to the superior materials now used, the more careful construction, and, in some cases, the more conservative use of

gasoline and oil, which obviated the troubles ensuing from sooted pistons and explosion chambers.

The exception to this rule, however, was R. E. Olds, driving a Reo car. He had bought some oil that, in his own language, had proven to be "liquid glue." It gummed up the pistons and settled in a soggy mass in the explosion chambers, from where it could be scraped out in quantities. Mr. Olds got rid of the stuff as quickly as possible, saving a small sample which he declared he intended to have analyzed just to ascertain what its component parts really were.

Thanks to the present system of positively driven water pumps, none of the engines met disaster as a result of the failure of their water pumps, and in all of the large gasoline cars little if any water was needed between stages. One manufacturer who prides himself on the cooling properties of his four-cylinder motor had, he claimed, the same water in his car at Pittsfield that he had started from New York with, and intended to finish without replenishing the supply.

The showing of the two trucks, carrying hundreds of pounds of baggage, was indeed a remarkable one. The Knox wagon completed the run with a clean record, and negotiated the famous Jacobs ladder and Morey hill without assistance. The Packard truck had to undergo repairs at Worcester, a rear spring having given out. On the run to Lenox the truck was stalled on the Morey hill, and had to have assistance. It had, however, to its credit the extraordinary feat of climbing and descending the Mount Washington road, a task that taxed some of the touring cars to their limit.

That two commercial vehicles of these types could complete an 870-mile tour and hold their own on the road against pleasure vehicles, despite the heavy loads carried, is proof conclusive that the auto for business uses is keeping pace with its more speedy touring brother in improvement.

Tires in the Tour.

Tires stood the test of the 870-mile tour better than they have ever come through any similar event of the kind, showing clearly that large steps have been taken in the improvement of this most important part of the equipment of an automobile. During the eight days of running it was unusual to see a machine stopped by the roadside with an axle jacked up and the tire undergoing repair or replacement. Road conditions were in no wise responsible for this, as the roads were of the most varied character and quite as bad as in previous tours and endurance runs, with the exception of deep mud, which has no injurious effect on tires. The resolution adopted some time ago by the tire manufacturers fixing the sizes of tires to be used on cars of different weights doubtless had considerable effect in reducing tire troubles. The "bugaboo" of blow-outs which had marred the pleasure and spoiled the records of cars on previous runs was absent, and the tire representatives who accompanied the tour had an easier time than ever before. Extra shoes and inner tubes that were shipped to each night's stopping place were not drawn upon. Some of the cars went through the entire run, including the climb up Mt. Washington, without even so much as the pumping up of any of the tires.

There were on the cars that completed the run the following tires: Forty-one Diamond, 25 Goodrich, 20 Michelin, 20 International A. & V., 8 Dunlop, 4 Hartford Dunlop, and 8 Firestone solid tires. On several sets of the Goodrich tires the Bailey non-skid tread was used.

The tire troubles as reported unofficially were as follows:

Harlan W. Whipple, Peerless, three punctures, two tubes pinched and one blow-out.

Harold L. Pope, Pope-Tribune, one puncture.

Charles E. Walker, Pope-Hartford, two punctures.

J. D. Maxwell, Maxwell, one nail puncture.

R. M. Owens, Reo, rear tire blew out.

J. C. Kerrison, Cadillac, one puncture.

E. H. Cutler, Knox, two punctures.

W. N. Epping, White, one blow-out and one puncture.

Julius Mehlig, Knox, one inner tube ruined by defective shoe and one puncture.

G. H. Tyrrell, White, patch melted from rear tube.

Experiences in a Reo.

The drive from Worcester to Lenox, Mass., was an ideal one, and the tourists enjoyed the beautiful scenery of the Berkshire hills. The writer, riding in a 16-horsepower Reo car driven by R. E. Olds, had a trip unmarred by any mishap, and covered twenty miles an hour in the open country, up hill and down, despite the varying conditions of the road during this trip, which for several miles was through the hills on sandy trails, where the various cars followed in one another's tracks.

It was in country of this sort that the light and medium weight and powered cars made their best showing. They were able to get through the sand with materially less effort and waste of engine power than the heavy machines. Cars of 16-horsepower were taking grades on the high speed with equal passenger loads with the 40 and 50-horsepower ones, which were obliged to use their second and, at times, their low-speed gears.

On this stage of the run the tire question became an important one, and it is worthy of note that only one machine in the so-called "light" class experienced any trouble, that being the Owens Reo, on which a rear shoe blew up.

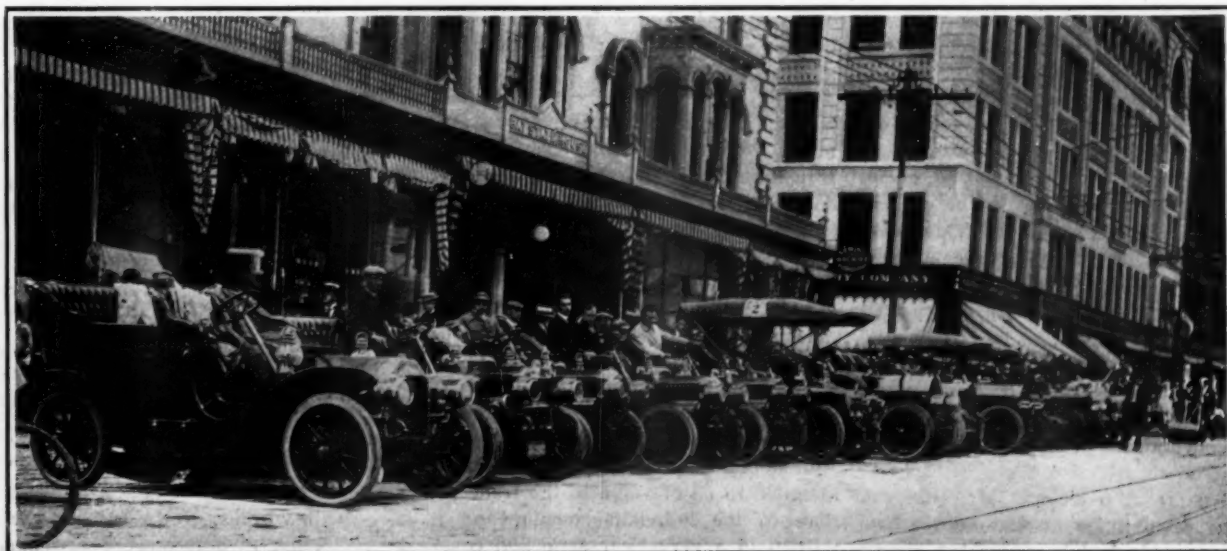
These comparisons, though not reflecting on the high-powered cars, which are in a class by themselves when the touring question is considered, demonstrate the fact that the medium-priced machine is equal in re-

liability and hill-climbing efficiency to the heavy touring machine.

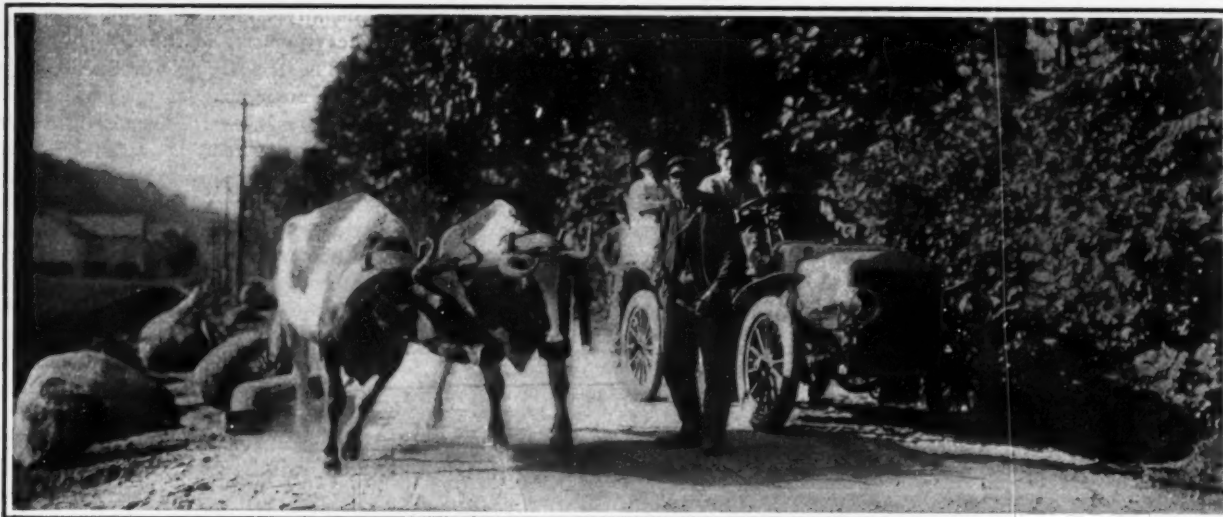
The trip from Worcester to Springfield was made without mishap, very few cars being met, as the contestants were strung along the road at various intervals, and none having any great amount of trouble, all kept their relative positions. The larger cars, taking advantage of their high speed, would at times lag behind, and then with a roar and a rush start for the head of the procession and tear up the roads for miles at a terrific pace, regardless of all speed restrictions and of the discomfort of the other tourists who had to take their dust.

At Springfield the Knox car that had been damaged was taken to the factory and the smashed dash was temporarily repaired. At the Knox place Mr. Glidden arranged with W. E. Wright, vice-president of the company, to ride as his guest in a Knox car to Lenox, Mass. The party started early and waited at the famous Morey hill, the top of which has an elevation of 1,846 feet, for the contestants. When the faithful little Reo reached the hill after successfully climbing "Jacob's ladder," it was decided to stop for a few minutes before taking the steep rise. The Pierce Great Arrow, driven by Percy Pierce, was also stopped. A number of automobilists from surrounding places had driven out to the hill and waited at the steepest part of the ascent to watch the tourists make the climb. Pierce attempted it first, and started off on his second speed, dropping back to low gear as soon as he struck the heavy grade. The car went up without difficulty, although at a low rate of speed.

The Reo started next and rushed part of the hill on the high gear and then dropping back to low speed ground up the remainder at a speed varying from six to eight miles an hour. On the steepest part of the grade the engine slowed up considerably and two of the passengers jumped out to lighten the load and ran



CARS IN THE GLIDDEN TOUR LINED UP OUTSIDE OF BAY STATE HOUSE IN WORCESTER, MASSACHUSETTS.



MAKING WAY FOR A FAMILIAR ROAD USER IN RURAL NEW ENGLAND ON THE GLIDDEN TOUR.

alongside. The car at once picked up and they were nearly left. There is no doubt, however, but that the machine would have climbed the hill without any lightening of the load, as there seemed to be a reserve of power. Throughout the run the Reo had negotiated all the hills in good style and had held its own wonderfully well.

This steep hill passed, the run to Lenox was made without mishap, the only car passed on the road being the Packard truck, which had stopped on a hill. The chauffeur in reply to questions asked said that it was nothing serious and that no assistance was needed.

At the open-air garage below the Aspinwall Hotel all of the cars were gone over carefully. One fact that was particularly noticeable was that but very little gear or chain trouble had been experienced despite the severe character of the roads traversed and the hundreds of hills negotiated. There was little adjusting done to chains on any of the cars, a condition no doubt due to the fact that the chain manufacturers, like the tire men, have been insisting on heavier equipment. Brake bands and clutches seemed to have suffered the most severely. Almost all of the drivers had more or less adjusting to do on their coils and in the way of adjusting the sparking system and cleaning plugs. Beyond a good oiling of working parts no great attention was given them. This state of affairs was a great contrast to that experienced in the earlier endurance runs when half the night was spent on dozens of cars at a time making repairs and replacing parts.

The last day of the tour, embracing the run from Lenox, Mass., to New York city consisted of a 143-mile run through a most beautiful country and over most excellent roads. There were no end of hills to be negotiated of all grades and conditions. The tourists for the greater part made the start at 6 o'clock, Mr. Glidden giving the word to go at that hour. No regular noon stop had been decided upon, and although some of the tourists took

dinner at Peekskill, a number of them had lunches put up at the hotel or bought eatables en route and camped out by the side of the road.

A weak part in an upper tube let down the rear tire on the Reo and a half hour was spent in making repairs. Apart from that the trip to New York was made without incident, the water, gasoline and oil supply being replenished at Poughkeepsie. At the end of the run the motor was running quietly and without any grinding of gears or knocking of loose parts, and seemed to be in as good condition as at the start, which appeared to be the case with any number of other entrants.

Throughout the country the people were uniformly courteous in giving road directions and in supplying any of the wants of the tourists. In some of the smaller towns the houses were decorated and the passage of the machines was made a gala event, the people in the cars being warmly welcomed. The spirit of antagonism against automobiles seemed to have disappeared to a great extent. Drivers of horses were willing to give up half the road when an auto approached and the men in the machines were equally willing to give the horsemen every chance.

Les Litiges de l'Automobile, which might be freely translated "Automobile Litigation," is the title of a new French book of 270 pages issued by Vve. Ch. Dunod, 49 Quai des Grands Augustins, Paris. This covers a variety of topics having to do with legal-commercial side of the industry, such as delays in delivery, claims for defects of construction, cancellation of sales, repairs, hiring and the like. The book is the joint production of J. Imbrecq, attorney-at-law, and L. Perisse, engineer and secretary of the Technical Committee of the Automobile Club of France. The book is intended to be of value to the trade rather than to the individual owner, and it is written in a very clear style and covers a surprising number of causes of dispute.

Entrants and Passengers.

- Briscoe, Benjamin, Tarrytown, N. Y.; car No. 18; Maxwell, 16 horsepower; passengers, C. G. Stowe, Mr. Smith; driver, Fritz Offenhauser.
- Church, A. W., Rockford, Ill.; car No. 12, Decauville, 30-35 horsepower; accompanied by L. A. Mitchell.
- Coburn, Ralph, Boston; car No. 41, Maxwell, 16 horsepower; passengers Mr. and Mrs. Holland; driver, I. C. Kirkham.
- Cuneo, Mrs. John N., Richmond Hill, L. I.; car No. 22, White, 15 horsepower; accompanied by Mr. Cuneo, Miss Grace Disbrow and Louis Disbrow.
- Cutler, E. H., Springfield, Mass.; car No. 35, Knox, 14-15 horsepower; passenger, C. R. Culver.
- Draper, George Otis, Hopedale, Mass.; car No. 10, Packard, 22 horsepower; no passengers; accompanied by chauffeur.
- Epping, W. N., Pittsburg, Pa.; car No. 36, White, 15 horsepower; accompanied by C. H. Dixon, R. P. Johnston and chauffeur.
- Fitch, Ezra H., Montclair, N. J., car No. 34, White, 15 horsepower; passengers, Mrs. Fitch and daughter.
- Gilmore, E. A., Boston, Mass.; car No. 24, Rambler, 18 horsepower; accompanied by wife and chauffeur.
- Hutchinson, Sidney E.; car No. 21, Panhard, 50 horsepower; accompanied by Mrs. Hutchinson and chauffeur.
- Kelsey, C. W., Philadelphia; car No. 42, Maxwell, 16 horsepower; passengers, Mr. and Mrs. N. H. Brewster and H. W. Perry.
- Kerrison, John C., Boston, Mass., car No. 32, Cadillac, 12 horsepower; passengers, Mrs. J. C. Kerrison and daughter.
- Maxwell, J. D., Tarrytown, N. Y.; car No. 19, Maxwell, 8 horsepower; passenger, J. Ross.
- Mehlig, Julius, New Orleans; car No. 38, Knox, 16 horsepower; passengers, Mrs. J. Mehlig and child.

Morrell, Robert L., New York City; car No. 27, Locomobile, 40 horsepower; passenger, Mrs. R. L. Morrell; driver and a dog.

Olds, R. E., Lansing, Mich., car No. 30, Reo, 16 horsepower; passengers, Alfred Reeves, Duncan Curry and chauffeur for R. M. Owen.

Owen, R. M., New York City; car No. 31, Reo, 16 horsepower; passenger, Mrs. R. M. Owen, Mr. and Mrs. John Gerrie.

Page, Carl, New York City; car No. 8, White, 15 horsepower; passengers, Ed. Spooner, W. J. Hedley and Joseph Bell, Jr.

Pierce, Percy P., Buffalo; car No. 14, Pierce, 28 horsepower; passengers, Mr. and Mrs. George N. Pierce, Miss L. J. Moody; driver, George Ulrich.

Pope, Albert L., Hartford, Conn., car No. 17, Pope-Toledo, 45 horsepower; passengers, A. W. Pope, A. L. Pope; chauffeur.

TABLE OF UNOFFICIAL DATA OF CARS IN THE GLIDDEN 1,000-MILE TOUR, JULY 11 TO 22, 1905.

Entered by	Passengers	Cooling	Tires	Tire	Car	Motive	H.P.	Type of Engine	Record.
	Carried.	System.	Used.	Troubles.	No.	Car	Power.		
Elliot C. Lee, Boston	4				1	White	steam .10	compound	Did not make complete tour.
W. C. Temple, Pittsburg	4 and 5	water	4 Michelin	none.	2	Pierce	gasoline. 40	4 cyl.	1 broken spark plug; 1 wheel cone and balls ground up.
Harlan W. Whipple, Andover, Mass.	5	water	3 Goodrich 1 Diamond	3 punctures 2 pinches 1 blow out	3	Peerless	gasoline. 35	4 cyl.	Foul spark plug, brake bands tightened; new spark coil put in; fan belt broken.
Jas. L. Breese, Southampton, L. I.		water			4	Mercedes	gasoline. 40	4 cyl.	Did not start.
R. P. Scott, Baltimore					5	Peerless	gasoline. 35	4 cyl.	Did not start.
Augustus Post, New York City	3		4 Diamond	none	6	White	steam .15	compound	Clean record.
Lewis R. Speare, Boston		water			7	Winton			Did not start.
Carl H. Page, New York City	4		4 Diamond	none	8	White	steam .15	comp'nd.	One stop, mud guard bolts loose.
C. J. Edwards, Brooklyn	4	water	Michelin		9	Cadillac	gasoline. 24-30	4 cyl.	Did not finish. Steering gear broken by car upsetting on bridge.
G. O. Draper, Hopedale, Mass.	4	water	2 Diamond 2 Goodrich	none	10	Packard	gasoline. 22	4 cyl.	Clean record.
W. B. Hurlbert, New York City	5	water			11	Packard	gasoline. 28	4 cyl.	Did not start.
A. W. Church, Rockford, Ill.	2	water	Continental	none	12	Decauville	gasoline. 30-35	4 cyl.	Engine overheated; chain jumped sprocket.
C. J. Glidden		water	English Dunlop		13	Napier	gasoline. 24	4 cyl.	Did not start.
Percy P. Pierce, Buffalo	5	water	4 Goodrich	none	14	Pierce	gasoline. 28	4 cyl.	Clean record.
Harold L. Pope, Hagerstown	2	water	4 Goodrich	1 puncture	15	Pope-Tribune	gasoline. 12	2 cyl.	Fender rod broken; gasoline tank sprung leak.
Chas. E. Walker, Hartford	3	water	4 Diamond	2 punctures	16	Pope-Hartford	gasoline. 18	2 cyl.	opposed.
A. L. Pope, Hartford	3	water	4 Diamond	none	17	Pope-Toledo	gasoline. 45	4 cyl.	Reported clean record
Benj. Briscoe, Tarrytown, N. Y.	4 and 5	water	Internat'l A and V	none	18	Maxwell	gasoline. 16	2 cyl.	Broke connecting rod.
J. D. Maxwell, Tarrytown, N. Y.	2	water	Internat'l A and V	1 nail puncture.	19	Maxwell	gasoline. 8	2 cyl.	Broke differential key.
K. C. Pardee, New York City	4	water	Internat'l A and V		20	Maxwell	gasoline. 16	2 cyl.	Did not start.
S. E. Hutchinson, Philadelphia	4	water	Michelin		21	Panhard	gasoline. 50	4 cyl.	Broke crankshaft.
Mrs. J. N. Cuneo, Richmond Hill, L. I.	4		4 Diamond	none	22	White	steam .15	comp'nd.	Broken water pump; ditched at Greenwich; driving shaft broken near Lenox, Mass.
E. H. Woods, Boston	3	water	4 Michelin		23	Napier	gasoline. 18	4 cyl.	Bent distance rod.
E. A. Gilmore, Boston	4	water	4 Diamond	none	24	Rambler	gasoline. 18	dbl. cyl.	opposed.
G. H. Lowe, Boston	4	water	4 Goodrich		25	White	steam .15	comp'nd.	Did not start.
Walter C. White, Cleveland	2		4 Diamond	none	26	White	steam .15	comp'nd.	No mechanical trouble.
R. L. Morrell, New York City	4	water	4 Diamond	none	27	Locomobile	gasoline. 40	4 cyl.	No repairs.
S. B. Stevens, Rome, N. Y.	2	water	Michelin	none	28	Darracq	gasoline. 15-20	4 cyl.	Clean record.
H. Thomas, New York City	2	water	Internat'l A and V	none	29	Maxwell	gasoline. 8	2 cyl.	Left tour at Boston. Broke axle in collision first day.
R. E. Olds, Lansing, Mich.	4 and 5	water	Bailey tread 1 inner tube 4 Goodrich melted.		30	Reo	gasoline. 16	2 cyl.	Short circuited wires.
R. M. Owens, New York City	4	water	Bailey tread 1 rear shoe 4 Goodrich blew up.		31	Reo	gasoline. 16	2 cyl.	Clean record.
J. C. Kerrison, Boston	4	water	4 Hartford Dunlops	1 puncture.	32	Cadillac	gasoline. 12	4 cyl.	Dirty spark plugs.
S. B. Bowman, New York City	4	water			33	Clement Bayard	gasoline. 30	4 cyl.	Did not start.
E. H. Fitch, Montclair, N. J.	4		4 Diamond	none	34	White	steam .15	comp'nd.	
E. H. Cutler, Springfield, Mass.	4	air cooled	4 Diamond	2 punctures	35	Knox	gasoline. 14-15	2 cyl.	Hood crushed by collision with lumber wagon.
W. M. Epping, Pittsburg	4		4 Diamond	1 blow out, 1 puncture.	36	White	steam .15	comp'nd.	Clean record.
A. A. Grout, Orange, Mass.	4	water			37	Grout	gasoline. 24-30	4 cyl.	Did not start officially.
Julius Mehlig, New Orleans	3	air cooled	4 Dunlop	1 puncture 1 tube mt.d	38	Knox	gasoline. 16	2 cyl.	opposed.
G. H. Tyrrell, New York City	3 and 4		4 Diamond	patch melted rear tube	39	White	steam .15	comp'nd.	Replaced one high-pressure hose.
Wm. A. Lamson, New York City	4		4 Dunlop		40	White	steam .15	comp'nd.	Left tour at Plymouth.
Ralph Coburn, New York City	4	water	Internat'l A and V	none	41	Maxwell	gasoline. 16	2 cyl.	Clean record.
C. W. Kelsey, Philadelphia	4	water	Internat'l A and V	none	42	Maxwell	gasoline. 16	2 cyl.	Broke connecting rod.
Packard Motor Car Co	2 to 6	water	Firestone solid	none none	50	Packard truck	gasoline. 22-24	4 cyl.	Rear spring repaired.
Knox Automobile Co.	2	air cooled	Firestone solid		60	Knox truck	gasoline. 16	2 cyl.	opposed

Pope, Harold L., Hagerstown, Md.; car No. 15, Pope-Tribune, 12 horsepower; passengers, R. I. Pope and J. N. Deatrich.

Post, Augustus, New York City; car No. 6, White, 15 horsepower; passenger, Mr. Reglid.

Temple, W. C., Pittsburg, Pa.; car No. 2, Pierce Great Arrow, 40 horsepower; passengers, Mrs. W. C. Temple and C. E. Wolff, Jr.; driver, Mr. Wilson.

Thomas, Hugh, New York City; car No. 29, Maxwell, 8 horsepower; passenger, Mrs. Hugh Thomas.

Tyrral, George H., New York City; car No. 39, White, 15 horsepower; accompanied by chauffeur.

Whipple, Harlan W., Andover, Mass.; car No. 3, Peerless, 35 horsepower; passengers, Mrs. H. W. Whipple and son, J. Harry Sheldon; Mr. and Mrs. Winthrop W. Scarritt went as far as Bretton Woods in this car.

White, Walter C., Cleveland, Ohio; car No. 26, White steamer, 15 horsepower; accompanied by chauffeur.

Woods, Edward H., Boston, Mass.; car No. 23, Napier, 18 horsepower; accompanied by chauffeur.

Bases for Awarding the Trophy.

"Contestants will not be able to secure any definite information as to the method by which a decision is to be arrived at in selecting the winner of the Glidden trophy nor regarding the bases upon which credit points are to be awarded, until after a meeting of the tour committee in the first week of August at Boston or New York," said A. B. Tucker, special representative of the A. A. A. Glidden tour committee, at the Aspinwall Hotel at Lenox, Mass., to a representative of THE AUTOMOBILE last Thursday. "No one knows," he said, "how the scores will be figured and final results arrived at except Mr. Glidden and Mr. Kurtz, a civil engineer of the Licensed Association of Automobile Manufacturers, who had been especially commissioned to arrange the bases for points."

Each day, at the completion of the run, the contestants were required to fill in a record card like the one for the last day, which is reproduced herewith.

These cards were carefully preserved, and will provide much of the data from which the commission will make its calculations, and on which the results will be based so far as the actual service and merits of the various machines are concerned. Economy will be an essential of qualification. In addition to this complete card system of reports, each contestant was allowed on the last day of the run to vote for three cars which, by his ballot, were commended to the consideration of the commission. By this means it is hoped to get a consensus of opinion from the tourists themselves as to which cars are deserving of the greatest praise.



PACKARD GASOLINE TRUCK DESCENDING MT. WASHINGTON WITH A LIVE LOAD.

The meeting of the cup commission will be held in either New York or Boston, as suits the convenience of W. K. Vanderbilt, Jr., who represents the Automobile Club of France and the Deutscher Automobile Club.

SATURDAY, JULY 22, 1905.

American Automobile Association, GLIDDEN TROPHY TOUR.

(To secure points for the day this card must be handed to M. L. Downs, not later than 9 P. M.)

To assist the Commission in awarding the Trophy, entrants will find it to their advantage to fill out, ABSOLUTELY CORRECTLY, the daily report card. The data furnished will be used in connection with a formula (to be published after the completion of the tour) in arriving at the total number of points to which each entrant is entitled, the maximum to equal 1,000 or 1,200 if a special contest is held under Article VII, clause 1b, of the Conditions governing the tour.

If the daily run is not completed within eleven hours, 10 points will be deducted for the day, excepting on the last day, July 22, when 14 hours will be allowed for the drive.

Cars with occupants will be weighed at some point during the tour

Gasoline consumed (gallons)?

Lubricants consumed (quarts)?

Time delayed en route due to mechanical difficulties?

Time delayed en route due to tire troubles?

Time delayed en route due to other causes (state circumstances)?

Amount paid for services of persons other than occupants of car?

Number of persons actually employed making repairs if any?

Amount paid out for all parts and supplies (itemizing same on back of card) not heretofore included?

Number of occupants carried in car this day?

Time of departure? Time of arrival?

I hereby certify that the above statement is true.

Witness:

Entrant.

Occupant of car

COPY OF CONTESTANTS' DAILY RECORD CARD.

The other members of the commission for 1905 are: Elliot Lee, chairman, representing the A. A. A.; Dave H. Morris, representing the A. C. A.; George McQuesten, representing the Automobile Club of Great

Britain and Ireland, and Charles J. Glidden, donor of the trophy.

NEW PUBLICATIONS.

The Black Motor Car is a summer novel that is a thriller. It is written by Harris Burland, and published by G. W. Dillingham Co., of New York, bound in illustrated cloth and with a frontispiece that gives you an inkling of the love story in the book. The black motor car is a swift one, and certainly it can make a few hours fly away pretty fast. The ingenuity of a Poe in creating crime and a Conan Doyle in detecting it is fused with the thrilling savagery of a Stephenson tale in the construction of the story, which turns around the life of one John Porteous, alias Jordison, who goes to the bad for the love of a woman not his wife, and after a term of convict life gets into the automobile business in France and cleans up a fortune. With this he returns to England, his native land, builds the black motor car and starts out on a career of vengeance, which has for its aim the destruction of the woman whom he loved instead of his wife, and the death of the man whom he supposes murdered his son. There are more wheels within wheels in the story than in an equalizing gear, and it is as full of electric surprises as an Edison storage battery, and a heap more efficient in giving you a run for your money. The machine that raised so much Cain is described by the author as "made entirely of steel. * * * It had a 9-foot wheel base and was 18 feet in length and * * * weighed no less than three tons." He also writes that it could go about 90 miles an hour over ordinary English roads. We suggest to him in a confidential way that if he will let some of the big tire companies into the secret of how Jordison got around with a 6,000-pound car at 90 miles an hour without a puncture or a blow out, he will make a bigger income during the coming years than any author the world knows.

There are now more automobiles on the streets every day in Greenville than there are baby cabs.—*Covington (O.) Gazette.*

NEW RECORDS IN "CLIMB TO THE CLOUDS."

William Hilliard, in Napier Racer, Cuts Harkness' Record to 20:58 2-5—Motorcycle Record Less than a Second Slower—Stanley Cuts Steam Figures Six Minutes.

By CHARLES F. MARDEN.

SUMMIT HOUSE, Mt. Washington, July 18.—As was the case at the inaugural "Climb to the Clouds" in 1904, the real record-breaking work was reserved for the second and final day of the tournament this year. The day broke clear on the Summit, much of the moisture had soaked out of the road and conditions generally were excellent for the machines and their drivers. The indications for a good day were so promising that no attempt was made to take advantage of the early morning to send up machines, and it was not until after 7 o'clock that the first car was ready to make the ascent. This delay was unfortunate, for in the middle of the forenoon a stray cloud floating along caught on the summit of the high mountain and clung there for the rest of the day, although the weather was clear at the Halfway House and the base. Sometimes the clouds broke enough to give a glimpse of the base, and at other times they emitted sharp showers.

The great event of the second day, and of the meeting, was the wonderful climb of the Napier Gordon Bennett racer, piloted by William H. Hilliard, of Boston, assisted by Frank Townsend as machinist. This car made the steep eight-mile ascent in 20:58 2-5, reducing by 3 minutes 39 1-5 seconds the record of 24:37 3-5 that was made by Harry Harkness with his Mercedes last year. The Napier started at exactly 8 o'clock in the free-for-all class, passed the two-mile man at 8:04:50, roared past the

Halfway House at 8:09 and in seventeen minutes after the start it was at the six-mile post. As he passed each post the news was telephoned to the Summit, and the little group of officials and newspaper men that had stayed in the Summit House over night were eager with excitement. They saw Hilliard pass the six-mile post and shortly afterwards heard the faint artillery of the engine as the car mounted the steep grades. At 8:20:58 2-5 the car leaped over the rocky road to the finish line at the first barn, the red flag dropped, and a new hill-climbing record had been made.

Hilliard was congratulated warmly, but seemed to take his performance as a matter of course, his only concern being, apparently, that he had not made better time. Coming to the Halfway House, he said, he had trouble with the clutch, and Townsend had to hold it in with his hands. Further along a battery wire snapped and the battery box had to be unstrapped and the wire repaired. He thought that if he had another try he might cut a couple of minutes from his record. The car is a 40-60-h.p., four-cylinder racer, that was constructed for the British team in the Gordon Bennett race of two years ago in Ireland. It was brought to this country last winter, exhibited at the Boston show, and has since had an enviable career. It won at the Springfield hill-climb, under the guidance of Hilliard, again at the Worcester hill-climb, and took the most exciting race of the day at the

Bay State Automobile Association meeting on Memorial Day. Hilliard was formerly a bicycle pace rider, but he has been an automobile driver for several years.

Next to the record-breaking climb of the Napier, the most important results were the performances of the Indian motorcycles ridden by Stanley T. Kellogg and Oscar Hedstrom. Three times these little machines made the ascent, and each time the record was reduced, until it was brought to within 4-5 of a second of the Napier's time. Kellogg started the ball rolling at 10.17, when he started up the mountain on a single-cylinder machine of 1 3-4 horsepower. He crossed the finish in 26:24, having reduced the record for motorcycles from 34:11 3-5, the best time made at the climb last year. A little later Hedstrom, on his two-cylinder Indian, made the climb in 22:42, the fastest time ever made on the mountain, with the exception of that of the Napier car. In the late afternoon Kellogg made another trial, this time using a two-cylinder machine, and he put the time down to 20:59 1-5.

The record for steamers was materially reduced in the course of the day, although it was not until the last attempt that Bert Holland put the record at its lowest point. Last year F. E. Stanley made the climb in 28:19 2-5. On his first trial to-day he set a new mark of 27:17. This was with the 15-horsepower car in the class for cars of 851 to 1,432 pounds. With the 10-horse-



NAPIER RACING CAR WHICH CUT THE MT. WASHINGTON CLIMB TO THE CLOUDS TO 20 MINUTES 58 2-5 SECONDS.

Results of Climb to the Clouds, Second Day, Tuesday, July 18.

Car No.	Car.	Driver.	Start.	Finish.	Time.	Event.
18	White	Webb Jay	7:19	7:58:01	39:01	4
15	Napier	W. H. Hilliard	8:00	8:20:58 2-5	20:58 2-5	10 Record
8	Stevens-Duryea	Otto Nestman	8:24	Ordered off course		4
29	Stanley	F. E. Stanley	8:44	9:11:17 2-5	27:17 2-5	8
39	Richard-Brasier	Van Tine	9:50	10:16:38 2-5	26:38 2-5	9
2	Pope-Toledo	Chas. Soules	10:12	Stopped at Halfway House		6
37	Indian	S. T. Kellogg	10:17	10:43:24	26:24	13
14	Cameron	E. S. Cameron	10:20	11:22:24 2-5	1:03:24 2-5	7
20	Crawford	R. S. Crawford	10:30	11:41:35 2-5	1:11:35 2-5	7
36	Indian	Oscar Hedstrom	11:22	11:44:42	22:42	13
8	Stevens-Duryea	Otto Nestman	Ran into ditch at mile post		4
11	Maxwell	C. W. Kelsey	12:08	12:59:41 3-5	51:41 3-5	8
21	Marion	Peabody	12:22	1:32:57 3-5	1:10:57 3-5	8
38	Indian	S. T. Kellogg	12:42	1:32:59 1-5	20:59 1-5	13 Record
18	White	Webb Jay	1:10	1:43:32 2-5	33:32 2-5	9
2	Pope-Toledo	Chas. Soules	3:07	3:54:24	47:24 4-5	11
29	Stanley	Bert Holland	3:25	3:47:17 3-5	22:17 3-5	10
8	Stevens-Duryea	Otto Nestman	3:32	Stopped by bearing trouble		10
10	Columbia	H. P. Maxim	3:51	Reached Halfway House only		14
38	Indian	S. T. Kellogg	4:09	Punctured a tire		Record trial
26	Buick	A. H. Weissner	4:14	4:50:35 4-5	36:35 4-5	14
41	Buick	4:25	Stopped at two mile		14

power car a little later, in the event for cars of 551 to 851 pounds, Bert Holland made the ascent in 30:34 2-5. Late in the afternoon Holland mounted the 15-horsepower machine and started in the free-for-all class against the record of the Napier. He fairly flew up the mountain, his machine bounding from one side of the road to the other in the bad places. Though he made every effort and pressed his machine to do its best, he was unable to equal the record for the mountain. He succeeded, however, in putting the time for steam vehicles to 22:17 3-5. When the machine reached the summit, nearly all the seat spindles were broken. In Stanley's attempt he broke the water indicator tube and burned out the fusible plug.

Twice during the day Webb Jay made the ascent with a White steamer. On the first attempt, made early in the forenoon, he climbed in 39:01, which was a cut of more than three minutes from his time of last year. In the afternoon he made another essay at the mountain, and accomplished the flight in 33:32 2-5.

Much interest was felt in what would be done by the big Richard-Brasier, entered by Hugo R. Johnstone. The car arrived in this country only on last Wednesday, was brought directly to the mountain and was transferred by E. B. Gallaher to Mr. Johnstone yesterday. The car was in the hands of Van Tine, who had driven it up the mountain on Sunday in good time. It was started to-day at 9.50, and was making fast time, when the pan beneath the motor broke and dragged all the way up the hill. Near the top a rubber coat caught on the driving shaft, and was wrapped around it in a flash. Even with these handicaps, however, the climb was accomplished in 26:38 2-5.

Charles Soules, with the Pope-Toledo, had hard luck all through the day. On his first attempt he was coming fast, and had reached the six-mile post when his headlight broke off. It fell to the road, and as the car passed over it, the light jammed beneath the gasoline tank and broke off a petcock. Soules had to run the car back down the mountain for repairs. A second attempt resulted in a broken water pipe. On this

trial the car was sent up in 47:24 4-5. This was the 45-horsepower car, and was the only contestant in the class for gasoline cars of any weight or power.

From the automobilist's point of view, the performances of the small cars to-day were remarkable, demonstrating a great advance in construction in the course of the past year. The Cameron was the first to try the hard eight-mile climb, and it and the Crawford were on the road at the same time. E. S. Cameron started his spider-like machine at 10.20. On the way up his motor got very warm, but he finished at 11:23:24 2-5, having taken 1:03:24 2-5 to make the ascent. The Crawford, piloted by R. J. Crawford, started ten minutes behind the Cameron, and climbed in 1:11:25 2-5. The Maxwell made the fastest time for a machine of its power in the tournament. Driven by C. W. Kelsey, this car started in the 851 to 1,432 pounds class at 12.08 o'clock, and finished in 51:41 3-5. The Marion in the same class, with F. H. Peabody in charge, climbed in 1:10:57 3-5. A 22-horsepower Buick driven by A. H. Weissner, which was not regularly entered in the climb, was permitted to enter the class for two-cylinder gasoline cars, and was the only car in event 14 to finish. It made the climb in the remarkable time of 36:25 4-5.

Early in the afternoon the cars which had climbed the mountain during the forenoon were permitted to descend. The first to go down the road was the Napier, with Hilliard at the wheel. He was told to proceed no farther than the Halfway House, and there to await further orders. Disregarding his instructions, however, Hilliard drove through to the bottom of the mountain. He was threatened with being disqualified for this proceeding. One of the last machines to make the descent was the Packard truck that had climbed the mountain on Sunday. The sending down of the machines made it late in the afternoon before others could come up, so it was after 6 o'clock when the program for the climb was finished and the officials descended on the cog railway for the last time.

Proposes Abandonment of Climb.

In a letter explaining the reasons for a charge of \$2 for every car and 80 cents for each passenger that went up Mount Washington during the time of the "Climb to the Clouds," over which there was some criticism, W. J. Morgan, promoter of the contest, states that he is personally disinclined to have the event repeated next year. Entry blanks were out this year before the Mount Washington Road Company could be induced to come to a decision as to whether or not the automobilists might use the road again this year and what the charges would be. The company was urged to charge no toll, but as the road has never paid even interest on the investment of \$100,000 expended in building it, the company would not let so good an opportunity to realize something go by, and in two days took in nearly \$500 from the automobilists, charging toll not only for those cars that took part in the contest, but also for those going up only for practise trials, each ascent costing the entrant \$3.60.

Mr. Morgan disclaims emphatically receiving any portion of the toll. He thinks it inadvisable to have another climb up Mount Washington, saying that when the



TELEPHONE EXPERTS AND OFFICIALS AT THE SIX-MILE POST ON MT. WASHINGTON.



S. T. KELLOGG TAKING TURN ABOVE SIX-MILE POST ON AN INDIAN MOTORCYCLE IN RECORD RIDE OF 20:39 1-5.



C. W. KELSEY AND J. D. MAXWELL IN 16-H.P. MAXWELL (No. 42 IN GLIDDEN TOUR) MAKING ASCENT IN 51:41 3-5.



R. S. CRAWFORD TAKING STEEPEST PITCH ON MOUNT WASHINGTON ROAD IN 10 H.P. CRAWFORD IN SECOND DAY'S EVENTS.

"Climb to the Clouds" was inaugurated last year the record to the summit was two hours, which in two years has been brought down to 20 minutes 58 2-5 seconds, which is very close to the safety limit. It has been demonstrated that automobiles of all classes have been brought to a state of perfection where they can ascend the steepest mountain roads as fast as anybody would care to drive them, and faster than the ascent can be made by any other means of transportation, so that no further advantage is to be derived from repeating the event over the same course. Accommodations at Glen, at the foot of the mountain, were inadequate, and the nearest points at which decent accommodations could be secured were at Gorham and Randolph, eight to ten miles, and Jefferson Highlands, about fifteen miles. Last year Anderson & Price, proprietors of the Mount Washington and Mount Pleasant hotels, paid one-half of the tolls, and the Summit Company contributed the other half toward the fund, which made possible the White Mountain automobile tournament, but this year neither the railroads nor the other hotels cared to contribute, so the burden fell entirely upon Anderson & Price, who did not feel that, in addition to providing the prizes and shouldering a large number of other

expenses, they could pay the road expenses.

In consideration of these facts, Mr. Morgan suggests that climbs over some other mountain roads in the vicinity or a mountain tour with safely regulated speed and fuel economy tests and military maneuvers would give more general satisfaction next year.

New Metropolitan Garage.

The latest addition to the list of metropolitan garages, that of the Hewitt Motor Co., Inc., which was opened on the first of this month at 6, 8 and 10 East Thirty-first street, is one of the largest and most completely equipped establishments of the kind in the city, occupying all three floors and the basement of each of the three buildings at that address. Not only will a large storage and repair business be conducted, but several complete cars will be manufactured and marketed as well. The officers of the corporation which will conduct the business are Edward R. Hewitt, president; George W. Phillips, vice-president and treasurer, and Charles O. Snyder, secretary and general manager.

The three buildings occupied by the firm were formerly used as stables, but have been

reconstructed and strengthened to fit them for their new use. The weight of the floors is carried upon longitudinal steel girders, which in turn rest upon transverse double trusses, and these are supported by columns which pass through all the floors down to a rock foundation, thus giving a stability of construction not always found in buildings of this class. A large elevator capable of carrying the largest and heaviest cars extends through all floors of the main building.

The outside of the building is attractively painted in white with green trimmings, and these two colors also predominate in the decoration of the office and the salesroom, which occupies the entire front of the ground floor in the main building, the walls being covered with green burlap and the ceilings, cornices and trimmings finished in ivory white. Back of the office and reached by an incline from the street level, is the main storage floor, having space for forty or forty-five large cars. The flooring is of cement and three large repair pits are provided.

The second floor of this building contains the drafting room, stock room and main assembling room of the factory. The third floor and the basement are devoted to dead storage and will accommodate seventy-five cars. The basement also contains the stock room for the repair of the "Long Distance" automobiles, formerly made by the U. S. Long Distance Automobile Co., of Jersey City. The manufacture of these machines having been discontinued, the entire supply of parts has been purchased and replacements and repairs of these cars will be made by the Hewitt Motor Co.

The main floor of the smaller building is also devoted to storage purposes, but the second floor is occupied by a completely equipped machine shop, which contains many special pieces of machinery in addition to the usual lathes, planers, shapers drill presses, milling machines and grinders. Electric power is used. The third floor of this building contains the pattern room.

The cars to be marketed by the Hewitt Motor Co. comprise a runabout having a motor of 8 to 10-horsepower with a single horizontal cylinder, a hooded delivery wagon using the same motor and a 25-horsepower touring car with four cylinder vertical motor.

Mr. J. W. Miller, the well-known traveling salesman for the Wayne Shoe Company, has decided to cut out long waits for trains in small towns where it takes considerably more time to catch trains out than to sell customers. In fact, he intends to stop traveling by rail except at times when the country roads get bad. Mr. Miller has purchased an automobile and has had it arranged so that he can strap his trunks behind and carry his samples with him. His territory lies in Ohio and Indiana, and in nice weather he figures that he can save both time and money with his machine—*Fort Wayne (Ind.) Gazette.*



HEWITT MOTOR COMPANY'S GARAGE ON EAST THIRTY-FIRST STREET, NEW YORK.

Letter Box

The Gordon Bennett Race Viewed by an Independent Observer.

Editor THE AUTOMOBILE:

[238.]—Technically this year's Gordon-Bennett race has been, in some respects, very instructive. Above all else, it was a trial of tires, and the result is a tribute to the far-sightedness and ability of Michelin. In conversation with the engineer of one of the "eliminated" French cars, I was told that the adhesive coefficient of the new tires had been found experimentally to be roughly 30 per cent. greater than that of the corrugated rubber tread. These new tires have a leather tread about 2 inches wide let into the rubber, to which it is vulcanized. Three rows of steel studs, the heads of which project to prevent skidding, anchor the leather to the outer layers of fabric. At the double curve near La Goutelle I observed the cars during the last three rounds. The road-gripping ability of the French and Italian cars was certainly greater than that of their rivals.

The lessons to be drawn from the race are, I think, three in number: The importance of proper weight distribution on the axles, the necessity of the most thorough and painstaking tuning up, and the value of the leather tread and steel studs in tires.

The following is a fairly complete résumé of the histories of the various cars:

Richard-Brasier. Théry stopped 9 minutes 40 seconds changing all his tires early in the third round. He complained of losing time in passing the Americans on narrow stretches of road. **Cailliois.** Motor smoked badly on first and second round, also slightly on fourth round. In all, stopped eleven times to clean fouled igniters. Both these cars were fitted with shock absorbers, and D. W. F. bearings in gear box and hubs.

F. I. A. T. Nazzari had no stops. He also complained of being obstructed by the American team. He states that no adjustment was made on his car during the race, and that it never missed an explosion. He handled his car regularly and cleanly on the curves, used wheel brakes on approach, and foot pedal on curve. **Cagno** had the belt drive of his lubricator constantly slipping until he stopped over two minutes in third round to tighten it. **Lancia** retired in the third round when leading Théry by about twenty-two minutes. Some object, probably a stone, dented his radiator, causing a leak. His efforts to plug it being unsuccessful, he drove on until overheating caused seizing in No. 3 cylinder. He drove beautifully. His car was not so well balanced as Théry's, the rear wheels skidding at lower speeds; but in spite of this handicap he took his turns fully four miles an hour faster, or about twenty miles as

against Théry's sixteen. His method of bringing the car into its course after standing nearly across it was splendid. All his braking was done on the approach, and the power again applied just before pulling the car into her course. He deserved to win.

Mercedes. Jenatzy retired in third round. His motor smoked badly on the first round, and somewhat on the second. On the second round he took one corner at a speed second only to that of Lancia. Hieronymus retired in the second round, due to magneto troubles. In the first round his mechanic was making some adjustment under the foot-board, but the car was traveling well.

Burton was running poorly when passing Pontamur on first round. According to report, his retirement in second round was due to fuel-feed trouble. Braun seemed to lack dash. He cut out his engine early on approach, and used motor as brake. Tire troubles delayed him twenty-five minutes in third round. Werner drove very well, but had five troubles in second, third and fourth rounds.

De Caters, though driving splendidly, had tire troubles necessitating in all nearly an hour and a half's delay. His second circuit, done in 1 hour 39 minutes 14 seconds, was the second fastest made, and shows the power of the Mercedes cars had they not been handicapped. All these cars showed rather harsh spring suspension, producing a rather jerky action over small lumps. They heel perceptibly at corners, due to high center of gravity, probably, and skid rather markedly on the rear wheels.

De Dietrich. On the third round Duray lost about forty minutes attempting to stop a leak in the water tube leading from the radiator to the pump. Succeeding partially, he went from eleventh to sixth in the fourth round. On the first round he passed me on the level, doing splendidly. He took his curves at good speed, using his wheel brakes rather freely.

Wolseley. Both these cars seemed slow and unresponsive. They had neither accelerative nor speeding abilities. They had no accidents.

Napier. Earp drove well, but not very regularly. He skidded considerably with the rear wheels. The carbureter feed connection became loosened, allowing fuel to leak and necessitating several stops for supply. This car had wire wheels, and, with a few minor changes, is the same six-cylinder car which McDonald drove in Florida.

Pope-Toledo. Quigley retired in the first round. Lytle made a good endurance run.

Locomobile. I understand that Tracy was handicapped by clutch trouble, owing to which he retired in the second round.

The highest speeds per round of 85.5 miles were as follows:

FIRST ROUND.

Lancia	54. m. p. h.
Nazzari	51.2 "
Théry	51. "

SECOND ROUND.

De Caters	51.9 "
Lancia	50.2 "
Théry	48.2 "
Highest speed for total course of 342 miles:	
Théry	48.51 m. p. h.
Nazzari	46.69 "
Cagno	46.37 "
Cailliois	45.96 "

C. H. TAYLOR.

Dalton, Mass.

A Successful Kerosene Burner.

Editor THE AUTOMOBILE:

[239.]—I greatly enjoyed Mr. Penney's article on his experiences with a steam car in the July 13 issue of THE AUTOMOBILE, and believing that such experiences are mutually helpful if described, offer some of mine.

I began my experience with steam by purchasing a second-hand car, that proved to be less of a "snap" than I had expected, but offered the same miscellaneous opportunities for personal instruction that Mr. Penney so truthfully describes. I came near becoming involved in litigation with the firm that sold me the outfit, but concluded that the same money that would pay for a course of law might possibly pay for a course of study in steam, and so took up the work of reconstructing the car.

I tried two kerosene burners, and failed with both of them, not because I did not know how to handle them, but because they were not properly built. One of these kerosene burners I used for gasoline with considerable success, and the other I pulled to pieces and rebuilt, doing the job so thoroughly that I do not believe the makers would recognize it if they saw it. After that it worked well, and was very docile and extremely hot.

There are two important points in connection with kerosene burners which, if given proper attention, will bring success, and if neglected will make such experiences as Mr. Penney's all too frequent. It took me some time to realize that kerosene requires time to vaporize—much more time than gasoline needs—and that if the vaporization is hurried by using excessive heat in a short or thin vaporizing coil, it is apt to undergo some degree of destructive distillation, which leaves a residue of tar or other deposit; whereas, if the vaporizing coil is long, so that the oil will have some leisure in its passage, there is no trouble in getting a clear gas without heating the pipes to redness. In the burner I use the generator or vaporizer tube is about fifteen feet long, of 1-8-inch iron pipe.

The second point is to arrange to have the mixing tube kept as hot as possible without igniting the mixture passing through it. I carried my mixing tube, which was formerly under the burner, right through the fire and down through the top plate of the burner, so that it became hot as soon as the fire was started; and the gas,

instead of going to the fire in a wet or oily condition, reaches the gas apertures dry and hot. The flame produced by this gas in my burner gives a blue flame of intense heat; I never saw anything to equal it from gasoline. Of course, iron tubing must be used for the mixer in this arrangement, as brass or copper is liable to weaken under the intense heat and give trouble. Care must be taken to prevent the mixing tube from becoming overheated and causing back-firing, but a wrapping of asbestos is a ready and efficient preventative, and a little experimenting will show just how much is needed.

If one is careless about closing the valves of a burner of this kind, it is possible that it may become flushed with raw oil, but it is an easy matter to put a drain cock into the bottom plate to free the burner if this happens. By exercising care, I have never had any trouble in this direction.

The pilot light I use is a kerosene blow torch. It requires about three minutes to get this started and two minutes more to get the main burner going, after which I can get 300 pounds of steam in my tubular boiler in ten to fifteen minutes; I have never required more than 40 pounds air pressure. With this combination, it is easier to burn kerosene than it ever was to burn gasoline with ordinary burners, and I can control it better. The controlling valves should always be on the oil side of the burner; never on the gas side.

For jets I use a common 1-8-inch tee, with the supply piped into the side opening and a plug in the end opening; through the latter a hole is drilled for the gas. In the other end is a blind plug, which can be unscrewed for the purpose of cleaning the jet with a sharp wire.

My first kerosene burner, in which I used gasoline, was fitted to the machine I bought. After a great deal of work, I got this car into good working order, and had no difficulty in disposing of it at a figure that reimbursed me for the original cost as well

as for the cost of rebuilding. I believe the machine is still in service. I was well repaid for my labor by the information and experience gained, but I still had the fever, and soon began the construction of another car, this time building it from the ground up. It is on this machine that I use the kerosene burner described. The boiler is of the tubular type, 20 inches in diameter, and the engine has two cylinders of 3-inch bore and 3 1-2-inch stroke. The exhaust is carried to a tubular condenser under the hood at the front of the car. No attempt is made to prevent lubricating oil from getting into the boiler, and it does not seem to make any trouble. I use a pure mineral oil. Occasionally I put a very little sal soda into the water, and the combination seems to keep the peace pretty well.

Like Mr. Penney, I have had pump troubles, but I ended them by putting in a good-sized air chamber next to the pump on the supply side and another between the pump and the boiler. The first had the effect of equalizing the flow of water to the pump, and always keeping one cylinderful next to the pump, while the other prevents ramming in the pipes.

I use no water glass in this boiler; I have two thermostats, one controlling the water supply by means of a by-pass, and the other to shut off the fire in case the water supply fails. These seem to be sufficient. I have a water column and gauge cocks to verify the working of the thermostats, and thus far have had no trouble. On my trial trip, the water level did not vary half an inch. The water-level thermostat is an old idea, exploited and abandoned some forty years ago, being found effective only when kept free from deposit from the water, and in large boilers this deposit is a serious matter. The revival of the idea is due to the fact that the automobile boiler is not given to making deposits, and so the thermostat is a fairly reliable device. I have ideas for improvements along these lines, which I hope to

put into practice before long, and also some ideas with regard to the condenser, but I may say that both thermostats and condenser are sources of great comfort in their present state.

I have found that a good "dope" for making joints in kerosene pipes consists of glycerine and litharge; pure glycerine makes a good lubricant for the stems of valves and regulators.

GEO. A. HENDERSON.

Decatour, III.

We thank our correspondent for his very interesting contribution, which will doubtless be found helpful by others who are working along the same lines. We are always pleased to publish letters of this kind, describing difficulties and explaining the methods by which they were overcome, whether the subject is steam, gasoline, shop work, tools, "wrinkles," or what not.

Glidden Tourists Accused of Racing.

Editor THE AUTOMOBILE:

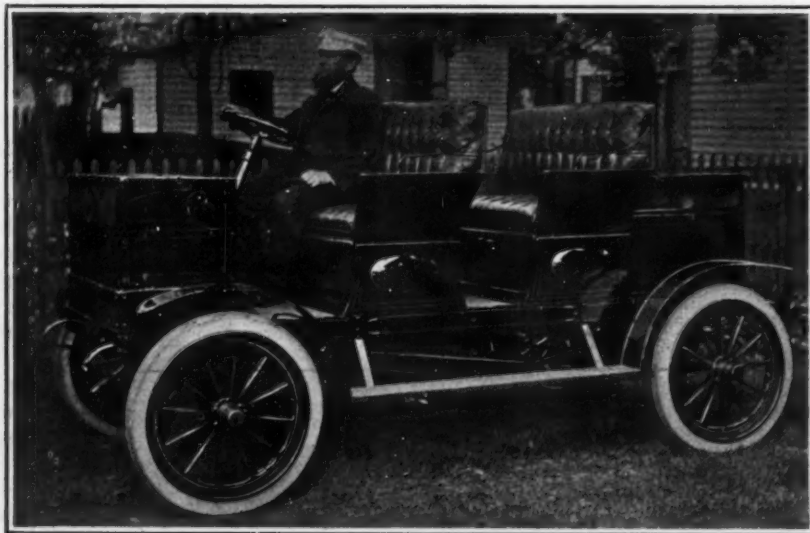
[240.]—The enclosed editorial by the editor of the *Manchester Union*, the most influential and widely circulated newspaper in New Hampshire, speaks for itself.

It seems to me that there is much justice in what the editor says, as there is no doubt in my mind but what many of the Glidden tourists grossly violated the speed laws of the state of New Hampshire, whose roads are not in any way fitted for fast work, being extremely narrow, in many places soft, and in many places have sharp turns which are more or less hidden by the abundance of trees that line the way.

It seems to me that it would be for the best interests of automobiling if you comment on this editorial, remembering that last winter the state of New Hampshire enacted very liberal and reasonable speed laws.

In our little tours last summer through the state there was little complaint from the people and there was not one accident caused by the automobile party. The second day we provided a pacemaker whose duty it was to regulate the pace, and it is my opinion that if the Glidden tour is to be made a success and not a helter and skelter race across the country to the detriment of automobiling and the damage of the citizens of the various states it passes through, the pacemaker must be provided, whose duty it shall be to regulate the speed of the tourists, especially when passing through towns and villages.

I consider the hauling into court of the tourists a most unfortunate affair, and many of them deserved to be hauled into court in many other places, according to the published reports of the speed maintained. The race commenced from New York, and no doubt continued until they arrived back in New York. Such things do not promote the best interests of the automobile and automobiling, and I have taken it upon myself to back up the opinions



KEROSENE BURNING STEAM CAR BUILT BY GEORGE A. HENDERSON.

uttered by the editor of the *Manchester Union*, whose opinions are those of the majority of the citizens of the state of New Hampshire, according to what we can gather from people coming and going to and from Bretton Woods.

W. J. MORGAN.

Bretton Woods, N. H.

Following is the text of the editorial referred to by Mr. Morgan:

AS TO AUTOMOBILES.

We could not say anything about it until it had happened. To talk about it in advance would manifestly be to offer battle to a possible shadow. But now that the procession has passed and the tour of New Hampshire by the A. A. A. (Automobile Association of America) is completed, it is fair to comment on it. To our mind the whole thing has been an almost entirely unmitigated nuisance. The lives and property of perfectly helpless people have been seriously menaced, the laws have been wilfully disregarded and for no earthly reason other than to afford amusement to a lot of perfect strangers.

There seems no reason at all why the people of this community should be subjected to such things.

Automobiles are good things—and some of the people who own them or drive them are fit to be trusted with them. But to tell the thing exactly as it is, the most of them are not. They seem to think that they have some right to use the road to the exclusion or discomfort of other people—to say the least. And a few entirely disregard the danger they cause to the lives and property of the people who live here, who built the road they are using and who keep them in repair for their own use.

Take the record of their run from Concord here, eighteen miles in forty minutes.

Have they any right to do such a thing? Take the list of accidents they caused between Concord and Nashua. An old man thrown out and his arm injured at Suncook, while his horse ran away and smashed the wagon and harness to bits. At Nashua, or near it, a collision with a lumber wagon and the driver of the auto hurt; near Nashua a horse on a mowing machine badly frightened and cut up.

All these things without redress offered or obtainable from the man who owns the machine. We say it is an outrage, and if these people think of coming here another year, we hope the law against "speeding" and "scorching" will be promptly and vigorously enforced against every offender. Let a few of them stay in jail for two or three days, and they and all the rest of us will be the better for it.

We like automobiles. We believe in them and enjoy them. We hope they have come to stay, and we see where great benefit will come to the state from their reasonable use. But to turn loose a lot of crazy mountebanks, bent on making a "record" over our roads, is a distinct outrage and ought to be stopped at once and for all. This is in the interest of the machine as well as in the interest of everybody else.

Comment upon the foregoing will be found in the editorial pages in this issue.

Automobile Shortens Distances.

Editor THE AUTOMOBILE:

[241.]—The writer has been interested of late in looking up different pamphlets issued by railroads, steamships and hotels, to note how long a trip is usually calculated as a day's journey from cities and popular resorts. As the automobile is only now coming into common use in the most distant of these resort localities, nearly all the local tours there are still based on the ground-covering ability of the average livery rig; and it is frequently interesting to see what their ordinary "standard" is.

Herewith I hand you a sample schedule of what is stated as "Delightful rides among the Catskills." It is certainly a novel thing in these days of fast traveling on both rail and road to see three days given to making a tour of 76 miles, or two days given to a tour of 57 miles. Especially so as these roads in the Catskills are very much better than the ordinary country road in New York State.

A THREE DAYS' RIDE.

Passing through Kaaterskill Clove and Stony Clove the first day and Bushnellville Clove the second day.

First day—
Catskill to Palenville..... 10 miles
Palenville, through Kaaterskill
Clove to Haines Corners..... 3 miles
Haines Corners to Tannersville. 3 miles
Tannersville to Kaaterskill Junction
..... 2 miles
Kaaterskill Junction to Phoenicia
(through Stony Clove)..... 12 miles
30 miles

Second day—
Phoenicia to Shandaken..... 5 miles
Shandaken (through Bushnellville
Clove) to Lexington.... 10 miles
Lexington to Hunter..... 9 miles
24 miles

Third day—
Hunter to Tannersville..... 5 miles
Tannersville to Haines Corners. 3 miles
Haines Corners to Catskill Mountain
House..... 2 miles
Catskill Mountain House to
Catskill 12 miles
22 miles

A side ride from Tannersville to
Onteora Park and return to Tannersville,
or by the other road to
Haines Corners from Onteora
Park, would add..... 4 miles
26 miles

Making in all 76 miles in three days.

A TWO DAYS' RIDE.

Catskill to Cairo..... 10 miles
Cairo to East Windham..... 10 miles
(Remain at Lamoreau's Summit
Mt. House over night.)
East Windham to Windham..... 6 miles
Windham to Hensonville..... 2 miles
Hensonville to Hunter..... 7 miles
Hunter to Catskill (as above).... 22 miles
57 miles

A touring motorist would have no difficulty whatever in making the 76 miles given above as a "three-days ride" between the mid-forenoon and late afternoon of an ordinary summer's day; while the 57 miles given as a "two-days ride" could easily be made in one afternoon. It is 141 miles from

Kingston to Binghamton over the Catskill Mountains, or nearly a half farther than the total distance given in this three-days (carriage ride); yet the Kingston-Binghamton trip has been covered many times in one day.

Just one other sample among many of the same kind. In an attractive little circular issued by one of the summer hotels at Randolph, N. H., there are short departments given to "walks," "drives" and "long drives." Under the latter head three three-days' runs are scheduled, the first to Franconia Notch, the second to Crawford North and Glen, and the third to Dixville Notch. In other words, using this hotel at Randolph as a basis, it would take the average carriage party nine days to cover these three excursions, totaling altogether not more than 150 miles.

Under ordinary conditions of weather and roads, the automobile would cover these three three-days' carriage runs, totaling nine days of driving, easily in two days. If it were laid out as one complete course over ordinary country, it might be done in one day. Is not this a striking testimony of the ability of the automobile to outdistance all former methods of road travel, and set an altogether new standard?

ROBERT BRUCE.

Clinton, Oneida Co., N. Y.

Foreign News Notes.

A remarkable incident occurred at the hearing of a motor conviction at Guilford, England, when a member of the bench, Mr. Cowley Lambert, publicly protested against a sentence of his fellow-magistrates on a motorist. Mr. Lambert stated that while determined to put a stop to reckless motoring, in his opinion, the crusade against automobilists was being carried out without a vestige of fair play, and was bringing disrepute on magistrates and justice, while the Guilford Bench in particular was making itself a laughing-stock and by-word. Mr. Cowley Lambert then left the Bench and the convictions went merrily on. His peroration should, however, make his fellow magistrates pause.

The German Automobile Club is preparing the rules for next year's race on the Taunus course, where the Gordon Bennett event took place last year. The race will be open to all recognized clubs, who are at liberty to enter from one to five cars, though only club members may drive. The distance will probably be from 400 to 500 kilometers, but this reduction is outweighed by the fact that repairs may only be made by the driver and his mechanic, and that all extraneous help is prohibited. This will render competition very keen and make the race a great sporting event. Following immediately on the close of the new Homburg contest will be a 150-kilometer race for 40 to 60-horsepower touring cars, open to all members of recognized clubs. With this race and the Herkomer Week the German A. C. will have an extremely busy season.

What to Do When the Motor Balks.

By A. D. RIVER.

Concluded from page 33, issue of July 13.

IF there is no spark at all, proceed in the same way as when looking for a weak spark. Having made sure that the coil is giving a good spark, try a new plug in the cylinder, as the old one may be short circuited. If this proves to be the case, clean the plug or replace the porcelain as described in the first section of this article.

If there is a good spark in the cylinder, and still the motor does not start, test the gasoline. A hydrometer is best for this purpose, and the gasoline should test preferably 72 or 74 degrees in winter. In the summer almost any good carbureter will use gasoline that tests 68 degrees. A rough test may be made by evaporating a few drops in the hand; if it evaporates quickly and completely it is fit to use.

WATER IN THE GASOLINE.

The presence of water in the gasoline may be detected by opening the drainage cock or taking out the plug screw in the bottom of the carbureter, and drawing off a cupful of the fluid. The offending water, if any is present, will be contained in this. This should also be done to wash out any dirt that may have lodged in the carbureter, preventing the float valve from closing and causing the carbureter to flood constantly. While this flooding may not always prevent the motor from starting, it will make the mixture over rich and irregular in quality. Flooding of the carbureter may also be due to a leaky float, if the float is of the hollow metal variety.

To repair a leaky float it should be carefully dried of gasoline and soldered by an expert tinsmith, the smallest possible quantity of solder being used. Sometimes the float valve will leak, and must be ground to its seat with crocus powder and oil. It is occasionally necessary to take the carbureter apart for the purpose of removing dirt that cannot be dislodged by flushing. This is especially true of dirt that may have lodged in the spraying nozzle. In doing this either leave the adjustments undisturbed or, if that is impossible or inconvenient, mark them so they can be restored.

ADJUSTING CARBURETER FLOAT.

The weight of the float should be such as to bring the level of the gasoline a very little below the tip of the spray nozzle. If the level in the nozzle is too high, the tilting of the car may cause the gasoline to feed by gravity; and if too low the gasoline may not feed fast enough at high piston speeds. To ascertain the actual level it is necessary to take off the upper part of the mixing chamber and the top of the float chamber, so that the float may be moved up and down by hand, which will show whether or not the float valve shuts off the gasoline

supply at the proper point. If the gasoline supply pipe is connected to the cover of the float chamber, as is the case with some carbureters, this plan cannot be followed, and it will be necessary to disconnect the carbureter entirely, set it level, and pour in gasoline until the float valve closes. A little cautious tilting of the carbureter will then show how much the spray nozzle must be lowered to bring it to the level of the gasoline in the float chamber, this, of course, roughly representing the difference of level between the two.

Failure of the carbureter to prime properly indicates a stoppage of the gasoline supply pipe. This may be due to fluff gathered from waste used in cleaning, or to other accidental causes, such as insects in the gasoline. It is sometimes necessary to disconnect the pipe from the tank to expel the obstruction. Care should be taken not to have any lighted matches or other naked flames around when this is done.

AN EXCESS OF GASOLINE.

After an investigation of this sort it is frequently necessary to get rid of an excess of gasoline in the mixing chamber. This can be done by turning the engine over several times with the relief cock open and the spark fully retarded. Never get the face or a hand within range of the relief cock when this is being done, or there will be danger of getting badly burned when the engine starts.

On cold days the engine may fail to start simply because the gasoline will not vaporize readily. This difficulty may be overcome by wrapping around the carbureter cloths rung out in hot water or by squirting a few drops of gasoline through the pet cock usually found in the head of the cylinder. On many foreign motors these cocks have on them little funnels about half the size of a thimble, measuring the proper quantity of gasoline for this purpose. Never, on any account, warm the carbureter with a torch or flame of any sort.

CARBURETER SELDOM GIVES TROUBLE.

It should not be supposed that it is frequently necessary to pull the carbureter to pieces in the manner described. With a good modern carbureter and reasonable care in straining the gasoline, the carbureter is almost the last thing to be touched in case of trouble, and it seldom requires anything more than an occasional draining from the bottom. Slight changes of adjustment, for different grades of gasoline or for changes in the weather, may be made by turning the mixture needle or lever slightly one way or the other, first marking the original position. Try the effect of each change. Such changes of adjustment should not be made

until everything short of dissecting the carbureter has been tried, as the carbureter is always carefully regulated before it leaves the factory.

An engine may start with reasonable facility, but run weakly or miss explosions. The causes of such behavior are rather numerous. Explosions irregularly missed point to a weak battery, defective insulation or imperfect electrical connections, and sometimes to short-circuiting of the plugs. If the explosions are regular but weak, a probable cause is poor compression. This is very likely to be due to leaky valves, though the leak of cylinder oil will produce the same effect. The piston rings may be clogged by burned oil, so that they cannot keep the piston tight in the cylinder; or the piston rings may be broken or badly worn. There may be a leak around the spark plug, or under the cylinder head, if it is of the separate type and bolted in place. The first of these causes, leaky valves, is the most likely to occur, and it is usually the exhaust valve that is in trouble.

HOW TO GRIND VALVES.

When a valve is to be ground the first thing to do is to make sure that none of the emery or other powder used for the purpose can get beyond the valve and into the cylinder. For this purpose a bunch of waste may be stuffed into the cylinder opening, a string being tied to the waste to prevent it from getting into the cylinder. The valve spring should then be slipped loose and the key removed so that the valve may be lifted. The grinding is done with emery of graded fineness, medium coarse emery being used if the valve is badly pitted or warped. Usually, however, but little grinding is needed, and only the finest flour emery should be used. The emery should be mixed with light machine oil and a little applied at a time. The valve should be rotated back and forth on its seat by quarter turns of a screw-driver, being by degrees slowly turned completely around. Emery and oil should be added occasionally to avoid metal to metal contact, and only light pressure should be applied. At the conclusion of the process both valve and seat should show dead smooth surfaces, without gloss or streaks. The last operation is to wash the parts, very carefully, with gasoline.

The inlet valve may be ground to its seat in the same way and its tightness tested by pouring a few drops of gasoline on the valve when on its seat. If the gasoline does not go through, the valve is tight.

CLOGGED PISTON RINGS.

If the piston rings are clogged they may be freed by injecting a spoonful of kerosene into the cylinder and turning the engine over a few times. This clogging of the rings can be easily avoided, however, by injecting a few drops of kerosene into the cylinder after every run. Gasoline is not well suited for this purpose unless the en-

engine is cold, as it is immediately evaporated.

The other causes of leakage require no explanation; it may be remarked, however, that the best packing to use under the cylinder head is a special form of asbestos sheet with wire gauze imbedded in it; the gauze prevents the blowing out of the asbestos. If this is not available plain asbestos sheet may be used, after coating it on both sides with flake graphite or else with shellac. The graphite prevents sticking, while the shellac helps to make the joint tight. Unfortunately, the two advantages cannot be combined. If the joint will remain tight without the use of shellac, so much the better. Sometimes a compromise can be made by using shellac on one side and graphite on the other, so that the removal of the cylinder head need not destroy the packing. When cutting new packing for a cylinder head, be very careful to cut out all the holes necessary for the circulation of the water, and also that the packing does not interfere with the valves.

WEAKENING OF VALVE SPRINGS.

A cause of imperfect running which does not show itself except at high speeds is the weakness of the valve springs, so that they do not return the valves to their seats with sufficient rapidity. The automobilist should learn to judge by feeling when his valve springs are at the proper tension, so that he will have a ready means of ascertaining whether or not they are the cause of trouble. The rapid weakening of valve springs is most frequently caused by the overheating of the engine through the stoppage of water circulation. The springs are, however, apt to weaken gradually in the natural order of things.

REPLACING THE 2 TO 1 GEARS.

Another cause of low power is failure to put the two to one gears together correctly when the cam shaft has been dismantled. Usually center punch marks are made in the sides of these gears, and these marks should be brought together when the gears are meshed. If there are no marks it is a safe rule, in most cases, to assemble the gears so that the exhaust valve closes exactly at the end or very slightly after the end of the exhaust stroke, regardless of when the valve opens. If the inlet valves are operated by a separate cam shaft they should be timed to open exactly when the exhaust valve closes, regardless of when they themselves close. Sometimes a cam will shear off its key and slip around on the shaft, thus giving incorrect timing of the valve.

A clogged muffler will cause loss of power, and this cause of trouble may be detected by cutting out the muffler in some way. With a muffler cut-out valve this is a simple matter; if there is no such valve the muffler or the exhaust pipe may be disconnected. With most mufflers it is a

good plan to inject an occasional dose of kerosene to clean them out.

FAULTY MIXTURE CAUSES TROUBLE.

In addition to the causes already mentioned, a faulty mixture, if not too much out of the way, will cause the engine to run weakly, but without missing explosions. A weak mixture will cause explosions in the muffler, while an over rich mixture will make a black smoke in the exhaust. A mixture may be unnecessarily rich without making smoke, but this cannot be remedied except by the careful adjustment of the carbureter.

Among the puzzling causes of misfire are broken or loose wires which fail to make contact on account of the vibration of the car; and a loose battery connection has been known to produce the same effect from the leaning of the battery cells against the wires when going up a hill.

If an engine is a multiple-cylinder one, it is always possible to tell whether the trouble is in the mixture or in the ignition by noting whether all the cylinders or only some of them miss explosions. In the latter case the trouble is usually traceable to the ignition. When all the cylinders miss explosions the trouble may be either electrical or in the mixture. If only one or two cylinders miss, the trouble will unquestionably be found in the vibrator, the wiring, the plugs or the distributor. One may readily determine which cylinders are missing by holding down the vibrator of one coil at a time. Where this cannot be done, as when a non-vibrator coil is used, the same result may be arrived at by short-circuiting all the plugs except one. This operation should be repeated until each cylinder has been tested individually. When high tension magneto ignition is used the method of testing just described will be suitable.

In conclusion, the beginner is cautioned on no account to neglect a small trouble simply because the motor will still run. If it is simply a case of misfire it is probably not serious, but the general rule is that a small trouble, if uncorrected, leads to a more serious one. If any unusual noise is heard, or if anything works hard that should work freely, investigate at once, and do not go on until you have located the trouble and corrected it. In this way you will get your experience cheaply, and will get far more enjoyment out of your machine.

A new authority on automobile fashions has appeared upon the horizon. The irrepressible Mr. Punch has authoritatively stated that passengers on motor 'busses need not wear goggles.

A traveling salesman out of Terre Haute last week substituted an automobile for regular train service, traveling 325 miles in four days, calling on seventy-five customers and returning home forty hours ahead of train schedule time.—*Paris (Ill.) Gazette*.

Another Captain Autoist.

When the big freighter *Wray Castle* makes port and docks, Captain P. Watson casts his eye over the landscape and makes mental note of the condition of the roads. Then he looks contentedly at a shapeless something covered with a tarpaulin on deck, and gives an order or two. In a twinkling the long arm of a derrick is brought over the curious looking heap and some one carefully lifts off the tarpaulin and reveals a smart, shining little automobile, all ready to run as soon as it feels the road. Slings are put under it and the tackle hooked on; and in a couple of minutes more the little machine is ashore and speeding away with the Captain at the wheel.

The Captain of the *Wray Castle* has had his car, a Baby Peugeot, for a year and a half, and takes it with him wherever his ship goes. Leaving New York early in July, the next port was to be Algiers, then Port Said, Aden, Singapore, Hong Kong, Shanghai, Moji Kobe (Japan) and Yokohama. At the latter place the outward voyage ends and the ship returns by the way it went, touching at the same ports. At every port the automobile is hoisted ashore and the country explored, and Captain Watson has had many amusing experiences in places where automobiles are seldom seen. Several of the wealthy natives who were invited to occupy a seat beside the nautical chauffeur became enthusiastic over the machine and wanted to buy it on the spot; and the Captain relates one story of a native nobleman of Java who solemnly offered his two best wives for the car.

When at sea Captain Watson gets almost as much pleasure from his car as when ashore, for his delight is in overhauling, cleaning, polishing and adjusting its machinery. His chief engineer has naturally taken a great interest in the machine, and together they keep the machine in the very pink of condition. As soon as the car is hoisted to the deck of the ship, the body is removed and stored in a spare cabin, while the chassis is lashed to the deck and covered with a tarpaulin. Half an hour suffices to complete the operation of getting the car ashore, or on board, so that no time is lost in this work.

Captain Watson says that he has had not the slightest trouble of any kind with the machine since the first time he essayed to take it apart. Being anxious to understand his machine thoroughly, even to the minutest details, he pulled everything down, examined everything and then put the car together again, to the best of his ability. When the operation was finished, however, the captain found that he had nearly enough parts left over to make another car, and it required the combined efforts of Captain and chief engineer for the remainder of that stage of the voyage to get everything in place.

First Motorcycle Race Meet Held in New York Is a Brilliant Success.

HOT finishes to closely contested events marked the first race meet for motorcycles exclusively that has been held in the vicinity of New York City, and though spectators were not present in large numbers, those who were there went away satisfied that they had witnessed a fine afternoon's sport. The meet was held under the joint auspices of the New York Motorcycle Club and the Federation of American Motorcyclists, with the sanction and under the rules of the latter, on Saturday afternoon, July 22, having been postponed from a fortnight earlier on account of rain. The track used was that of the Parkway Driving Club, located at the intersection of Coney Island Boulevard and Kings Highway; and though it afforded but a half mile circuit and was as flat as the brim of a straw hat, and rather dusty, the little machines got up a speed that looked to be terrific and negotiated the turns at hair-raising angles, the skill and pluck of the riders arousing genuine admiration.

The big event of the day was the five miles F. A. M. Eastern District championship, and it was well known before the start that the racing would be as hot as the riders could make it. Though there were seven entries, the real contest lay between J. P. Bruyere of Passaic, N. J., a Frenchman, riding a 5-horsepower Curtiss; Oscar Hedstrom of Springfield, Mass., designer of the Indian Motorcycle, and S. T. Kellogg, of Bridgeport, Conn., the last two riding 3 1-2-horsepower Indians; all three machines had double cylinder engines. The other entries were all regular road machines of 1 3-4 horsepower.

Kellogg made the best start, his machine starting promptly and picking up speed with such rapidity that a lead of twenty yards had been gained before the others had fairly got under way. Hedstrom followed Kellogg closely, but was soon caught by Bruyere and remained in third place throughout the race. Bruyere had his work cut out and went after Kellogg in dead earnest; but it was a long, hard pull. Kellogg's machine held the turns closely and well, while the Curtiss ran rather wide and lost something at each curve. Round and round they flew, Bruyere sometimes gaining a little on the flying Indian and sometimes losing a little; but superior horsepower gradually told, and it was seen that the Curtiss was closing the gap. But the surprising sprint of the Indian again and again came into play, and when the riders entered the last half mile the result was still in doubt and excitement was red hot.

In the first part of the last circuit Bruyere crept a little closer to Kellogg; but in the back stretch the Indian held its own; on the last turns, however, Bruyere made a remarkable spurt that brought him abreast

of Kellogg, and they entered the home stretch almost wheel to wheel. Then Bruyere shot several lengths ahead and looked like an easy winner, when the Indian again made one of its lightning sprints and for a few brief seconds it looked as if Bruyere would be overhauled before the tape was crossed. But his lead was too great, and though Kellogg cut it down to about two lengths and was gaining at every turn of his engine, Bruyere crossed first, amidst the yells of the spectators.

Bruyere is a clever rider; he recently made a mile in 1:06 on the Morris Park track, using the machine with which he won the F. A. M. championship. The time for the five miles was 7:33 3-5—fast going, considering the track conditions.

Bruyere also captured the one-mile F. A. M. Eastern District championship after a hot struggle. As in the five-mile event, he was led at first by Kellogg, whose lead he gradually cut down, winning by a small margin with Kellogg second and Hedstrom third, the same order as in the long race. Hedstrom's machine did not appear to work quite as well as Kellogg's in either event.

An event that caused a good deal of amusement and at the same time excellent sport, was the three-mile "hang together" race. The contestants were required to follow a pacemaker, keeping within fifty yards of him until a signal was given, when the real racing began. The pacemaker hit up a good hot clip, giving the slower machines some trouble to keep within the prescribed distance; and the breakaway signal was not given until the racers were rounding into the home stretch for the last time. Then the pacemaker dropped out and there was a grand sprint for the tape. Hedstrom, Bruyere and Kellogg at once shot out from the bunch of slower machines and fought it out to the tape. The sprinting Indian ridden by Hedstrom was a little too quick, however, and landed in first place with Bruyere a close second and Kellogg third. Fourth place was taken by F. M. Dampman, of New York, there being four prizes given.

The one-mile novice race, with which the meet opened, brought out eight starters, all mounted on regular road machines. The contest for first place was exceedingly close between F. O. Ericson, of Brooklyn, and R. H. Bartsch, of New York, the former riding a Reading Standard and the latter an Indian, both of 1 3-4-horsepower. The manner in which the novices held the turns and jockeyed each other was worthy of experienced racing men, and it was anybody's race right up to the tape. Ericson, however, had just a shade the best of it, and won by less than a length, with Bartsch second and Walter Jones third.

During this race occurred the only ac-

cident of the meet. A. A. Hoyt, of Brockton, Mass., fell while rounding the turn into the home stretch and broke his collar bone. A physician from the crowd attended to him and he was then taken away in an automobile. During the one-mile championship event Dampman fell, but was not hurt; he participated in subsequent races in which he was entered.

Ten starters lined up for the two-mile speed-judging contest. The object of this event was to ride the two miles as nearly as possible in 4 minutes 10 seconds, or at the rate of a mile in 2:05. It was most amusing to see the different ideas of speed shown by the riders as they strung out over the track; and it was also noteworthy that most of them guessed on the slow side, the winner, F. M. Dampmann, of New York, riding a 1 3-4 horsepower Indian, making the best ride in 4:19. F. W. Horenburger, of New York, riding a 3-horsepower Marsh, tied for second place with R. H. Bartsch, of New York, on a 1 3-4-horsepower Indian; and the two were sent off for a half-mile run to decide the tie. Horenburger got the best of it, leaving Bartsch in third place.

In the three-cornered pursuit race, which was run in three heats and a final, three riders were placed at equal distances apart around the track, and all started at once. They were then to ride until one of the machines overtook the other two, or until seven miles had been covered, when the man making the best time would be given first place. None of the heats went to the limit, however, though the event proved to be unexpectedly interesting. The heats were won by R. H. Bartsch, of New York, 1 3-4-horsepower Indian; E. W. Goodwin, of Brooklyn, on a similar machine; and F. O. Ericson, of Brooklyn, on a Reading Standard of 1 3-4 horsepower. Bartsch was soon out of it, so far as first place was concerned, and Ericson and Goodwin made a fine struggle for the Columbia bicycle which was offered as the first prize. Ericson gradually crept up on Goodwin, however, and overtook him, though it took nearly five and a half miles to do it.

Before the start of the final Goodwin protested Ericson's machine on the ground that it was not a regular stock roadster, only stock machines being eligible for the event. The protest was not sustained, however, the prize going to Ericson, who was complimented on his clever riding in all the events in which he entered. His machine showed remarkable speed for a road machine, and his win was a popular one.

The only race for machines all of the same make was the two-mile race for the Marsh cup, the entries being limited to Marsh motorcycles, these machines having 3-horsepower motors. After a good race F. W. Horenburger arrived first at the tape, closely followed by Thomas Chadwick, of New York. A. Kreuder, of New York, was third.

After the racing was over, many persons expressed surprise at the fine sport that had

been put up, and many expressed the belief that motorcycle racing would become very popular. It was a pleasure to note that every race had a good entry list, and that by far the greater part of the entries turned up when the bell was pulled. There were no aggravating breakdowns or sulking motors, and there was a total absence of any tendency on the part of the contestants to split hairs. Every one seemed bent on racing for all he was worth, and every one did it to the entire satisfaction of the spectators.

Allan W. Campbell, chairman of the F. A. M. Competition Committee, was referee; the judges were Joseph Oatman, president of the Autocycle Club, of New York; Daniel M. Adey, president of the Century Road Club Association, and E. W. Carritt, of the F. A. M., Brooklyn. The watches were held by R. B. Bach and R. Kelsey, of the Parkway Driving Club; E. Gerbereux, A. C. C. of New York, and J. M. Gentle, of New York. Charles T. Earl was starter; M. E. Topel, N. Y. M. C. C., scorer; and R. G. Betts, chairman of the F. A. M. managing committee.

Following are the summaries:

One-Mile Novice, open to single cylinder full roadsters—Won by F. O. Ericson's 1 3-4-h.p. Reading Standard; R. H. Bartsch's 1 3-4-h.p. Indian, second; H. Jehle's 1 5-8-h.p. Spiral, third. Time, 1:44 1-5.

One-Mile, Federation of American Motorcyclists' Eastern District Championship—Won by J. P. Bruyere's 5-h.p. Curtiss; S. T. Kellogg's 3 1-2-h.p. Indian second; Oscar Hedstrom's 3 1-2-h.p. Indian third. Time, 1:34.

Two Miles, for Marsh motorcycles only—Won by F. W. Horenburger, N. Y. M. C. C.; T. Chadwick, New York, second; A. Kreuder, N. Y. M. C. C., third. Time, 3:42 3-5.

Three-Mile Hang Together Race—Won by Oscar Hedstrom's 3 1-2-h.p. Indian; J. P. Bruyere's 5-h.p. Curtiss second; S. T. Kellogg's 3 1-2-h.p. Indian third. Time, 6:00.

Three-Cornered Pursuit Race—Won by F. O. Ericson's 1 3-4-h.p. Reading Standard; E. W. Goodwin's 1 3-4-h.p. Indian second; R. H. Bartsch's 1 3-4-h.p. Indian third. Distance, 5 1-3 miles.

Two Miles 2:05 Speed Judgment Contest—Won by F. M. Dampmann's 1 3-4-h.p. Indian. Time, 4:19.

Five-Mile F. A. M. Eastern District Championship—Won by J. P. Bruyere's 5-h.p. Curtiss; S. T. Kellogg's 3 1-2-h.p. Indian second; O. Hedstrom's 3 1-2-h.p. Indian third. Time, 7:33 1-5.

machine can readily be appreciated by any person who is conversant with the character of those who are reaping the golden harvest of Northwestern development. The possibilities of the Pacific Northwest as an automobile market would seem to be indicated by the fact that the banks of Oregon have on deposit savings averaging \$2,300 for every man, woman and child in the State.

Although the regular automobile exhibits at the Exposition have not materialized very extensively, interest in automobiles is strong in the metropolis of the Northwest. This has been fostered by the Portland Automobile Club, which has already given one race meet and several parades since the opening of the Fair. The fact that automobile stage lines are being introduced in several localities in Oregon, and that the Portland Auto-Dispatch has captured a considerable share of the heavy trucking business on the Exposition grounds and in the city of Portland, is serving to still further arouse interest.

A number of the general exhibitors at the Exposition are showing automobile accessories or utilities. The General Electric Co. of Schenectady, N. Y., for instance, in its immense display gives place to a mercury arc rectifier of 30 amperes capacity for charging storage batteries for automobiles. On the Exposition grounds a number of motor boats are employed to convey visitors to and from the United States Government Building which is situated on a peninsula jutting out into a 220-acre lake and to reach which entails a journey of more than half a mile.

The introductory lesson paper issued by the Correspondence School of Automobile Engineering, of Akron, O., contains a very comprehensive dictionary of automobile terms, and starts the pupil with a means for making clear any statement he does not understand through unfamiliarity with the phraseology used. Where it is considered necessary, the definitions are illustrated. Ten questions follow the dictionary, and these questions the pupil is expected to answer in a satisfactory manner before he receives the second lesson paper.

A battery, properly speaking, is a collection of cells, though a single cell is commonly and incorrectly called a "battery."

Automobiles at Lewis and Clark Exposition.

By WALDON FAWCETT.

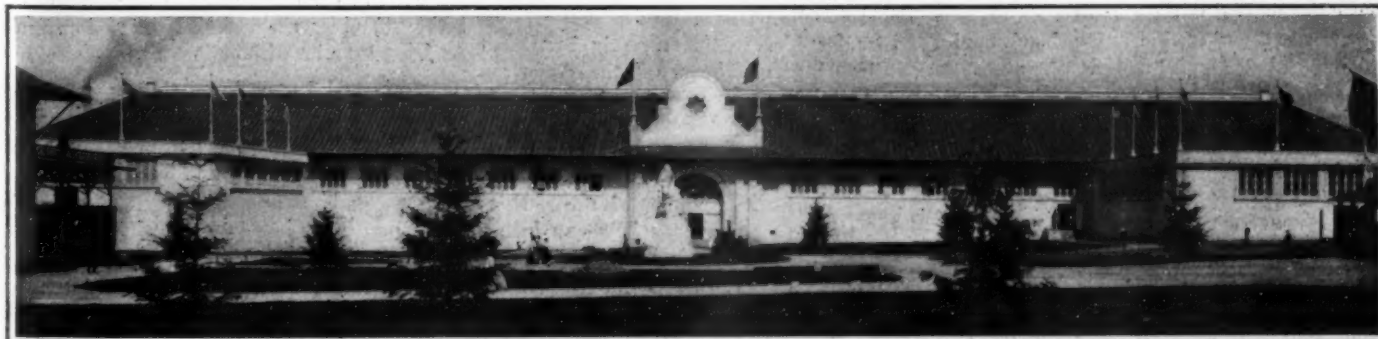
PORTLAND, ORE., July 12.—The automobile interests rank as one of the tardiest classes of exhibitors in the matter of completing their displays at the Lewis and Clark Exposition now in progress here., the Olds Motor Works of Detroit being the only concern which has an exhibit fully installed. This firm shows all its various products, including the standard runabout, touring car, delivery car and ten passenger wagonette.

The automobile exhibits at the Portland Fair have been assigned to the Transportation and Electricity Building. This is the longest building on the grounds, being 500 by 100 feet in size, with two wings, each 100 by 100 feet, which were added to the structure as originally planned because of the remarkable demand for space.

The Fair is being held in the Pacific Northwest, where a rapidly developing

country is as much of an attraction as the show itself. It is drawing from the East a well-to-do class of travelers who do not usually attend expositions. This latest addition to the list of international exhibitions is drawing from the 5,000,000 people of California and from the Pacific Northwest thousands of sightseers who have never before visited an exposition. The fact that these men are ranchers, bonanza farmers, salmon packers or miners does not detract from their eligibility as purchasers of automobiles. The fascination which an automobile can hold for a man who has made his "strike" in the West has been eloquently attested by the liberal patronage which has been bestowed during the past few weeks upon the livery vehicles and sightseeing automobiles in Portland.

That these men do not allow price to constitute an obstacle if pleased with a



TRANSPORTATION BUILDING AT LEWIS AND CLARK CENTENNIAL EXPOSITION, PORTLAND, OREGON, WHICH HOUSES AUTOMOBILE EXHIBIT

Orphans' Outings in Various Sections.

THE idea of setting aside a day to be known as Orphans' Automobile Day, which originated with the New York Motor Club early in the season, seems to have met with general favor. The New York club, as will be remembered, gave to a large number of the little dependents of several metropolitan institutions a most enjoyable ride and day's outing on June 7, since which time clubs throughout the country have followed this example and have treated the orphans of their respective communities with similar excursions.

Only a few days ago the Cleveland Automobile Club tendered to the poor children and orphans of that city a day's entertainment which proved to be a decided success. The committee in charge succeeded in getting together 175 cars, and with these more than 1,000 youngsters were conveyed to Gordon Park, where luncheon was served.

The reports published in the daily papers that the club had to resort to the street cars to transport the children is incorrect. They were all carried in automobiles, and to accomplish this it was necessary for many of the cars to make more than one trip. On this account no parade was attempted, and at no time during the day were there more than a dozen cars in line.

Owners had their cars at the club rooms in the Holleden Hotel early in the day, and as fast as they arrived they were dispatched to the different institutions, with instructions to take on a load, give the children a good ride through the parks and boulevards, and then, if possible, return for another load. Each car was numbered and every child carried a card showing to what institution the child belonged, and the number of the car.

At 11.30 o'clock A. M. all assembled on the golf grounds in Gordon Park, and it made a sight worth going miles to see. More than two hundred little girls from a Jewish institution were dressed in blue uniforms, while the boys from this school wore a somber drab. The girls from another school were all in pink, while those from still another were in white.

Through the courtesy of the daily papers a well-filled luncheon box was served to each child, and in groups under the trees they enjoyed the best picnic of their lives. Afterward all gathered around a band stand and joined in singing "America," and then they scattered for a romp, many of the boys heading for the bathing beach, where those who wanted to "go in" were provided with bathing suits. At four o'clock the "first comers" were on their way home, while those who came late were allowed to play until cars could return and get them.

There were no accidents, and only one little maiden became separated from her companions and was left after the others had gone. She was comforted by more candy and taken home by a policeman.

Then from the far South comes the report of the parade and entertainment given the inmates of Mobile (Alabama) asylums, which also afforded much pleasure not only to the children, but the older ones who had charge of the event.

About twenty-five cars took part in the parade, and after a ride through the principal streets of the city the cars were headed for South End, which is situated at the end of the Bay Shell Road, one of the most beautiful drives in the South. This famous road leads along the Bay of Mobile, and is lined with magnolia trees, which form an almost continuous arch for its entire length. Mobile county will soon acquire the road, and extend it for thirty-five miles to some of the coast towns.

At South End the children were entertained by the management of the Inn, and, after enjoying the many dainties furnished, the home run was begun.

It is the club's intention to continue these rides weekly until all of the orphans in the city have been given an outing.

Again, but a short time ago, Denver dropped into line, and the little ones of that Western city were given the time of their lives through the courtesy of the Colorado Automobile Club.

Still other clubs in various sections of the country are planning for the little tots of their respective towns similar outings for the near future.

A Catalogue for Engineers.

As manufacturers of automobiles and parts improve their product, it is but natural to expect that everything else connected with the business should improve at the same time; and there is no reason why trade literature should be an exception to this rule. Catalogues, circulars and other advertising publications have begun to show the effects of an appreciation of the fact that prospective purchasers are not looking for literary essays when they send for catalogues, but for information; for hard facts, not claims and opinions. A concern that shows a hearty interest in providing what is needed in this line is the Garford Company of Elyria, Ohio, which manufactures a limited line of automobile parts.

Circular No. 12 has recently been sent out by Hayden Eames of the American Trust Building, Cleveland, Ohio, who is sales manager for the Garford Company. This circular or catalogue consists of a series of double sheets on which are printed reproductions of drawings of the various parts, the larger drawings being 12 inches wide and 21 inches long. These drawings are of the type known to engineers as "assembly drawings," showing the various parts in position, drawings of this kind being of particular convenience to the engineer because he can tell by actual meas-

urements whether the design is what he needs. If any of the component parts of the assembly are required, they may be ordered by number, each separate part being plainly numbered for this purpose. The drawings are accompanied by short descriptions explaining the main points and giving information that cannot conveniently be conveyed by means of the drawings, and also stating what materials are used, and so on. There are no superlatives used, and no good ink is wasted in unnecessary verbiage.

The drawings show rear axles in several styles, complete with differentials and bevel driving gears, some with plain bearings and others with ball bearings, the Garford Company having abandoned rollers for this work; I-beam front axles with steering pivots, the axle forgings being composed of nickel steel; transmission gears of the sliding type; leather faced cone clutches; propeller shafts with universal joints, and steering gears. It is certainly a good sign when the manufacturer's natural inclination to say what he thinks—and every one knows what that is—about his own goods is subordinated to his interest in making things easier for his customer; and it is not difficult to believe that the customer will show his appreciation in the manner most pleasing to the manufacturer.

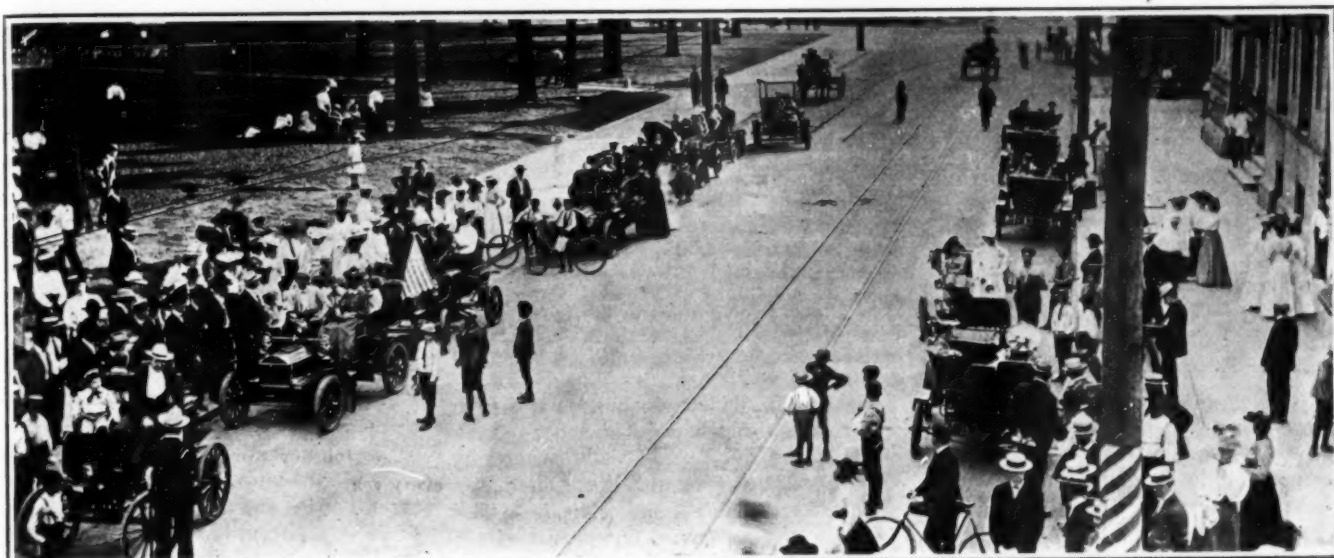
A new method of testing the viscosity and the internal frictional resistance of lubricating oils at various temperatures has been devised by the R. Gebrüder Korting Electrical Co., Limited, of Berlin, according to a report made by United States Commercial Agent Ernest L. Harris, of Eibensstock, Germany. The testing apparatus consists of a circular chamber in which rotates a sort of fan, resembling the vanes of a centrifugal pump. From each side of this chamber rises a pipe, the pipes connecting with the chamber, which is set on edge, at the center of its height. The oil to be tested is poured into the apparatus until it fills the chamber and rises a little distance into the pipes, which are fitted with glass tubes so that the oil can be observed. Means are provided for heating the oil chamber. The vane wheel is rotated by an electric motor. The power absorbed by the motor, in combination with the height of the oil in the tubes and the temperature of the oil, gives the necessary data for comparing samples of lubricants.

Our town has eleven autos in use. Where is the town of its size to beat it? The following are the possessors: L. C. Blood, 2; Dr. F. J. Dudley, 2; J. M. Shively, 2; R. C. Blood, 1; Sam Havely, 1; U. F. Rader, 1; P. Fisher, 1; Reed Chambers 1.—*Monticello (Ill.) Bulletin*.

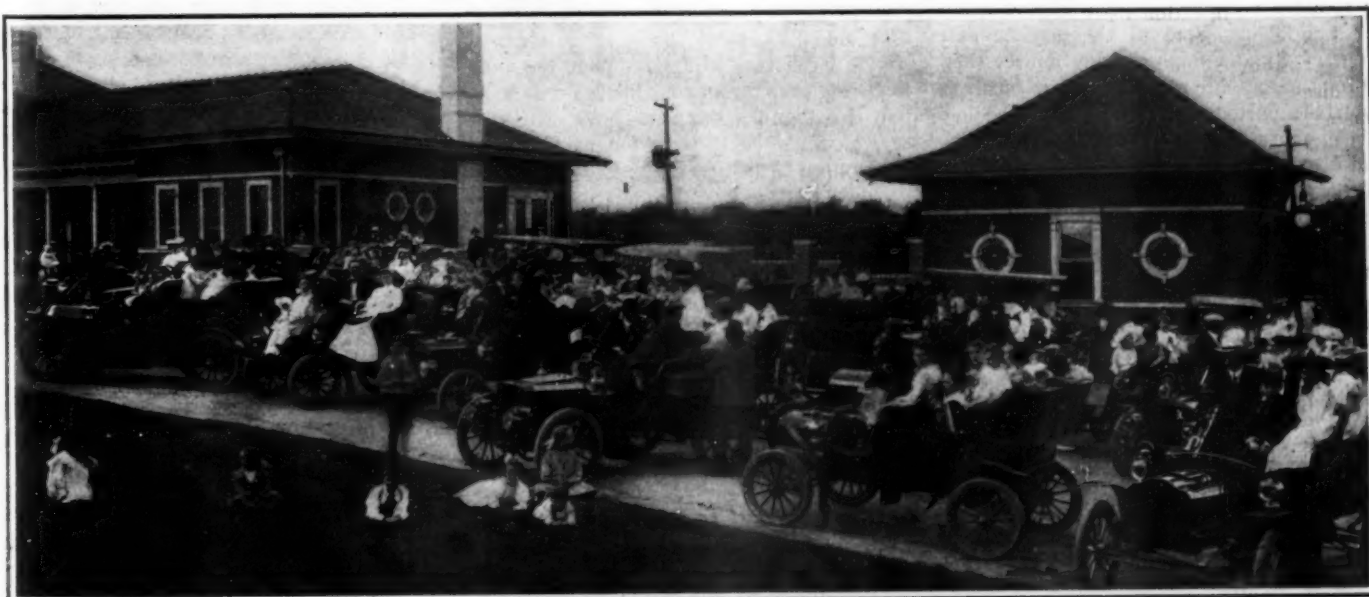
The farmers have been kicking because the automobiles have been frightening their horses. Like the bicycle, the horseless carriage has come to stay. The farmers will soon be riding in them.—*Exchange*.



CLEVELAND AUTOMOBILE CLUB'S ORPHANS' DAY—CHILDREN SINGING "AMERICA" WITH BAND IN GORDON PARK.



MOBILE, ALABAMA, AUTOMOBILE CLUB'S ORPHANS' PARADE—ARRIVAL AT SOUTH END ON BAY SHELL ROAD.



COLORADO AUTOMOBILE CLUB'S ORPHANS' OUTING—HAPPY LOT OF LITTLE ONES ON ARRIVAL AT CITY PARK, DENVER.



VOL. XIII.

No. 4

Published every Thursday by

THE CLASS JOURNAL CO.,
Flatiron Building, Madison Square,
NEW YORK CITY.

Cable Address - - - Autoland, New York
Long Distance Telephone - 300 Gramercy, New York

SUBSCRIPTION RATES:

United States, Canada and Mexico, - One Year, \$2.00
Other Countries in Postal Union, - One Year, \$3.00

To Subscribers—Do not send money by ordinary mail.
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FOREIGN SUBSCRIPTION AGENTS:

ENGLAND:—Hill & Sons, Limited, 3 St. Bride Street,
Ludgate Circus, London, E. C.

FRANCE:—Boyveau & Chevillet, 22 Rue de la Banque,
Paris.

GERMANY:—A. Seydel, Mohrenstrasse 9, Berlin.

To Advertisers—Copy or changes in orders for advertisements should reach us not later than 5 o'clock p. m. Monday for the issue of Saturday following.

Copyright, 1905, by The Class Journal Company.
Entered at New York N. Y., as second-class matter.

The Automobile is a consolidation of The Automobile (monthly) and the Motor Review (weekly).

Copies Printed in 1904, - - - 639,300
" " This Issue, - - - 14,000
" " Since Jan. 1, - 419,500

Effect of Glidden Tour on Outsiders. The success of the Glidden tour, as viewed by the automobilists, is offset not a little by the sentiment left in the wake of the string of thirty cars among the people living along the route of the tour. With every intention on the part of the donor of the valuable trophy to encourage the best use of the automobile, and on the part of the tour commission to conduct a competition that should make for the lasting good of the pastime and industry without imposing any unnecessary and disagreeable restrictions or burdens upon the participants, the illegal speeding of a number of the cars developed early and continued throughout to the conclusion of the tour in New York last Saturday evening. That these intentions were not carried out and the desires of the donor and the officials not loyally seconded and supported by all of the contestants for the trophy is unfortunate, for the effect of racing over the country roads and through the village limits in several states can be no less than to convert the friendly feeling of the people into disapprobation and perpetuate such opposition to automobiling as already exists.

While passing through New Hampshire the tourists were saluted with hand and voice by smiling men, women and children gathered in front of farmhouse, summer resort and town residence doors to watch

the vehicles go past. It was made unmistakably evident that the residents took great interest in the occasion and welcomed the automobilists to their section of the country. Some went so far as to decorate their houses with flags in honor of the visit, others to provide a band to serenade the tourists, and yet others to toss flowers into the cars as they passed. Such hospitality and confidence ought not to have been betrayed, yet the way a number of the cars rushed over the narrow and crooked roads, every turn of which was concealed by heavy growths of timber and brush, has led to not a little deserved criticism by the local press.

The incidents of the arrest of half a dozen tourists in Worcester for alleged speeding through Leicester, and the undignified demonstration as the automobilists took their departure, was most unfortunate. The effect already is made apparent by the remarks of the constable who made the arrests to a local representative of THE AUTOMOBILE:

"The automobilists have acted mean toward me," said Chief Quinn last Friday, "and I will now perform my duty to the very letter of the law. I have received my orders from the selectmen, and I intend to obey them if I have to bring every automobile driver that goes through town into court. I have made a practice of summoning only those who exceeded a rate of twenty miles an hour. All of the Glidden tourists summoned exceeded this rate. The law allows twelve miles in the town proper and fifteen miles to the lines. Now, any driver exceeding twelve miles an hour will be summoned."

Somewhat similar sentiment exists in other cities through which the tour passed, as is shown by the editorial reprinted by the *Manchester Union*, in the Letter Box department in this issue. No less than twenty-two names were on the list of the Leicester constable for running at more than the legal limit, but only eight summonses were prepared for service upon those who were timed at a rate of more than twenty miles an hour. It seems strange that most of those who were arrested should be drivers who maintained the most moderate pace throughout the 870-mile tour, but the dignified way to have acted, it seems, would be to have fought the cases to the limit if the arrests were unjust, or, if justified, to have paid the fines and departed without any demonstration.

That so few accidents occurred, especially on the narrow winding roads, is due more to good luck and to the knowledge of the residents that the tourists were coming than to moderate driving. Why every organized club run and tour should degenerate into a road race seems inexplicable to persons who take no part in them. The only apparent reason is the desire of a number of persons directly interested in the manufacture or sale of cars to secure the free advertising that the local newspapers along the way give by announcing the first arrivals. Added to this is the desire, latent in every human being, to show others that

he or his car—or horse, or bicycle, or locomotive—is better or faster than the other fellow's.

Nevertheless, if participants in such runs do not want to force abandonment of organized tours in the future, it is incumbent upon them to observe the exact legal rates of speed, both in cities and villages and in the open country. How this can be enforced is a problem, but a great deal can be accomplished in that direction by providing a pacemaker for each day's run and giving the committee power to disqualify any contestant who passes him. This, unfortunately, will not curb the drivers, who care more for the advertising to be gotten than for the trophy offered, but if half a dozen or more of the most representative men in the tour can be induced by the committee to agree to observe the rules themselves, and to use their moral influence upon the more reckless, the desired object undoubtedly could be attained.

In the Glidden tour there was every reason for traveling in a leisurely way: the scenery was grand and well worth viewing slowly; the weather made riding most enjoyable; the people along the route were friendly and of a type with whom a few words now and then would have been pleasant and perhaps profitable. Ample time was allowed by the conditions of the competition for an average of not to exceed twelve or fifteen miles an hour, so that ladies might go in the run and get great pleasure out of it without discomfort. Yet the chief object of the tour was nearly lost sight of in the ambition to "get there," and after rushing hurriedly past scenic features that thousands of persons journey hundreds of miles by rail every year to enjoy, the speed-crazed division arrived at the end of the day's run by noon, or shortly afterward, and then sat around the hotel with nothing to do but wait for the slower ones to come in.

There were notable exceptions to this, and even the fast ones acknowledged that those who started on the tour with cars equipped with Cape cart hoods, trunk racks, sufficient protection in the way of clothing for dust and rain, and who traveled in a leisurely and luxurious way, were making the most of the tour and doing it in the only proper way. It is to be hoped that next year's tour for the Glidden trophy will be a very different affair. The real competition then should be in comfort and luxuriousness in traveling by automobile—not in the speed and hill-climbing qualities of the machines, which have now been sufficiently proved.



Mechanical Excellence of Glidden Tour Cars.

The great strides that have been made by American automobile manufacturers have seldom been so forcibly brought to the attention of the public as they were by the recently completed Glidden tour from New York to the White Mountains and return—a journey of eight hundred odd miles over all kinds of roads and through all

kinds of country, in which all kinds of cars participated. Runabouts and heavy touring cars, baggage trucks and steamers, air-cooled motors and water-cooled motors—all traveled together, made the same journeys, surmounted the same difficulties, and all but four of the thirty-two starters returned to New York on Saturday, July 22. And of these four only two were forced to withdraw by mechanical troubles, the drivers of the other two dropping out for personal reasons. No one class of car had a majority of the small amount of trouble that occurred. The bigness of the big cars did not seem to give them any advantage over the smaller machines in this respect, and mechanical troubles were impartially, though sparingly, distributed.

From a mechanical point of view the most remarkable feature of the tour is the fact that troubles were the exception and not the rule—that they were unexpected, and not anticipated with dread. Cars participating in tours held in former years always aroused considerable comment when they succeeded in covering any considerable distance without break-downs of a more or less serious nature; but on the Glidden tour the sight of a car broken down or stopped for repairs was sure to arouse a feeling not far removed from surprise. Luck, which sometimes plays an important part when but a single car is concerned, could not be counted on to favor thirty-two all at once, and the wonderful showing made by the machines must be attributed to the advances made by the manufacturers in design and construction.

Ignition and tire troubles, as usual, occupy the greater part of the trouble list, as far as can be judged before the official data is available; but even these were conspicuously scarce in comparison with other tours. The most serious breakdowns were caused by accidents—collisions, running off bridges, and the like—but even such rough handling as this failed to do more than put the car temporarily out of commission, or make it "limp" until repairs could be made.

While the favorable weather conditions doubtless had something to do with the excellence of the showing made by the cars, it is also true that the steep hills and rough roads, and the long, hard runs, continued day after day, gave ample opportunity for the development of weakness; and the fact that so few weak points were brought out is certainly a cause for satisfaction on the part of the manufacturers of the cars that competed in the first Glidden tour.



Possibilities of the Motorcycle.

Saturday's race meet at the Parkway Driving Club track, near New York, was the means of bringing to the attention of many persons the exceedingly interesting possibilities of the motorcycle as a racing machine; and the appreciation given the fine sport afforded goes a long way toward substantiating the belief of motor-

cyclists that this kind of racing will be very popular in the near future. Racing, however, is but one of the things the motorcycle can do, and do well; it is on the road that this really wonderful little machine is at its best.

A well built motorcycle, if intelligently cared for, will give its owner but little more trouble than an ordinary bicycle that is kept in first-class condition. Though this may seem strange to the uninitiated, it is a fact. Accidental damage may occur, of course; but the motorcycle is not alone in this respect.

Only those who have ridden motorcycles can appreciate the pleasure of riding a machine that, while occupying no more road space than a common bicycle, will carry its rider over give-and-take roads as fast or as slowly as he cares to travel, and will climb steep hills in a manner that is especially astonishing to the old-time wheelman. The motorcycle is more than a match for the average automobile, on the level or hill-climbing; and the reserve energy of the little motor is such that no change-speed gearing is necessary. Climbing a steep hill means merely the wider opening of the throttle and the corresponding advance of the ignition; the motor at once responds, and the machine easily goes up grades that force most cars to fall back on low gears. In the recent "climb to the clouds," at Mount Washington, a double-cylinder motorcycle of 3-horsepower—a high power for an American machine—made the eight-mile climb on an average grade of 16 per cent. in 20 minutes 59 1-5 seconds. This was but four-fifths of a second slower than the record time made by a car having approximately twenty times the power of the motorcycle.

A very comfortable little two-passenger machine may be made by attaching a trailer, side carriage or fore-carriage to the motorcycle, the attachment carrying the second passenger. Even thus loaded, the motor will pull its load up fairly steep grades without assistance; and a few turns of the pedals on a hill that is too stiff for the motor alone

will take the machine up without difficulty. This is not necessarily hard work, for the motor is quick to feel the help, and needs but little encouragement. Instead of carrying a passenger, the extra seat may be replaced by a box for parcels or the like.

While the motorcycle cannot be considered in any way the rival of the automobile, it is frequently a stepping stone, so to speak, to the larger machine, and the knowledge of motors and the experience gained by the rider of a motorcycle in the management of his engine is of the greatest value to him when he graduates to a car. The man who cannot afford a car finds in the motorcycle a machine that requires no more storage room than the ordinary bicycle; that rarely requires expert attention, unless badly neglected; that will carry him faster and more comfortably than the ordinary wheel and bring him to his destination unwearied; and that costs but a trifle to run. It is a pleasure to ride the motorcycle. The puffing of the exhaust is but faintly heard by the rider, and once well under way, the vibration of the engine ceases to be felt, the machine rolling along smoothly and very steadily, up hill and on the level, like a continual coast.

The motorcycle has not, for some inexplicable reason, enjoyed the popularity here that it has achieved abroad. This is changing, however, and the present season seems to mark a decided increase in the popularity of the machine. It is worthy of note that American motorcycles, having motors of about 2-horsepower, seem capable of equaling the performances of foreign machines of much higher rated power. It would be interesting to know whether this is due to the underrating of American machines or the overrating of those built abroad, or both. The few foreign machines that have been seen in this country have offered few opportunities for making comparisons; but as far as it is possible to judge, the American machine has nothing to be ashamed of when its all-round performances are compared with the work of foreign-built machines.

CLEVELAND RACE MEET.

Two-Day Program Arranged by Local Club—List of Events.

Special Correspondence.

CLEVELAND, July 22.—The third annual race meet of the Cleveland Automobile Club will be held at Glenville track on Friday and Saturday, August 11-12. Six events have been arranged for each day, and as the meeting is one of the National Circuit Championship the usual five-mile free-for-all is included.

Following is a list of the events:
FRIDAY, AUGUST 11.

- Five miles, for cars weighing 1,432 pounds or less.
- Five miles for Diamond Cup, free-for-all.
- Five miles for stripped touring cars.
- Five miles; Cleveland Derby, first heat. Prize, \$500 cash, or plate. Must be four starters in race, two or more for each heat; the heat winners will be eligible to start in

the ten-mile final on Saturday, August 12. If the second in either heat shall finish in faster time than the winner of the other heat, he shall be eligible to start in the final.

Five miles for stock touring cars listing at \$2,000 and less.

Second heat of Cleveland Derby.

SATURDAY, AUGUST 12.

Five miles for touring cars with tonneau carrying three passengers in addition to driver.

Five miles, National Championship, free-for-all.

Five miles for cars weighing 1,200 pounds or less.

Five-mile handicap for touring cars with tonneau carrying three passengers in addition to driver.

Ten miles, final heat of Cleveland Derby. Specials and contests for time prizes.

Except as otherwise noted, the first prize in each event will be a silver trophy valued at \$50 to \$150.

Entries will close August 9 with C. A. Marvin, secretary Cleveland Automobile Club, Hollenden Hotel, Cleveland, O.

KANSAS CITY FIGHT.

A. C. of Kansas City Wins Fight Against Oppressive Ordinances.

KANSAS CITY, Mo., July 22.—The Automobile Club of Kansas City has practically won its fight against the two unjust city ordinances prescribing excessive taxes for the operation of vehicles and unreasonable restrictions as to the examination of operators.

Judge Brumback, of the Circuit Court, before whom is pending the application for an injunction restraining the city from enforcing the ordinances, has delayed his decision on the case until the attorneys for the club and the city have an opportunity to get together.

The judge told the attorneys that it was his desire that they get together and prepare an ordinance agreeable to both sides. "If this is done," he said, "I shall dismiss the case against the city. If the attorneys report back to me that they are unable to agree, then I shall make my decision in the case."

So far little has been done by the attorneys toward framing a suitable ordinance, and some time may elapse before definite action is taken on the judge's suggestion.

It is probable that the judge will decide against the city if the case is put up to him again. The Automobile Club made a strong case when the matter was presented.

BUFFALO AUTOISTS PLEASSED

At Park Commissioners Raising Speed Limit for Park Driveways.

Special Correspondence.

BUFFALO, July 24.—Buffalo automobilists are enthusiastic over the action of the Board of Park Commissioners in unanimously resolving to allow automobiles to run in the parkways at the rate of fifteen miles an hour. Recently the board passed a law restricting the speed to eight miles an hour. Several arrests were made under that law.

Automobilists who like to travel at a fair rate of speed were in a state of discontent over the passage of such a law. Frequently they complained of the inconvenience and dissatisfaction in having to keep within a speed of eight miles an hour while riding through the beautiful parkways. While not wanting to break any records, they declared in loud terms that the speed so designated was unreasonable. It was pointed out that horses going at an average rate made at least twelve miles an hour.

President A. H. Knoll, of the Automobile Club of Buffalo appeared before the park board armed with a mass of statistics. He showed how fast horses traveled ordinarily; how fast bicyclists go without violating the law, and showed by the comparison that there was really discrimination against the automobile. The board relented, finally fixing the speed at fifteen miles, with the stipulation that cars turning the Zoo angle must slow down to ten miles an hour. The board also directed its police to force horsemen and wheelmen to keep to the right of the roadway.

TESTING MICHIGAN LAW.

Special Correspondence.

GRAND RAPIDS, Mich., July 22.—Grand Rapids automobile drivers are busily engaged in fighting the State law. W. S. Daniels, proprietor of the Michigan Automobile Company, was fined \$12 and costs, amounting to \$20 in all, in police court, for exceeding the eight-mile limit. The case

was immediately appealed to the Circuit Court, and Mr. Daniels says it will go to the Supreme Court if necessary, in order to determine the exact meaning of the "business district."

Representative Edward T. Heald, one of the men who aided in the passage of the law, is attorney for Mr. Daniels. The case is a test.

TO PREVENT ACCIDENTS.

Mayor Orders Strict Enforcement of Toledo Regulations.

Special Correspondence.

TOLEDO, O., July 22.—Mayor R. H. Finch has issued an ultimatum to the effect that automobile speeding in Toledo must stop. The police have been notified of the mayor's intentions, and unless more attention is paid to automobile regulations wholesale arrests are likely to follow.

The decision of the city's chief executive was brought about by the number of accidents which have resulted recently. Last Sunday two persons were injured, one of them a policeman, and this seems to have been the straw which broke the camel's back.

Instructions have been issued frequently regarding the speed limit, but little attention has been paid to them. As a matter of fact, automobilists have learned to look upon the speed ordinances with considerable contempt, even though they provide heavy fines for violation.

The city's laws governing automobiles and similar vehicles are as follows:

"Be it ordained by the common council of the city of Toledo that no automobiles, motor cycles or other motor vehicles shall be operated or propelled on any street, avenue or highway in the city of Toledo at a greater rate than ten miles an hour.

"It shall be unlawful for any person or persons to permit any child under the age of 15 years to operate any automobile, motor cycle or other motor vehicle upon any street, avenue or highway in the city of Toledo.

"Any person violating any of the provisions of this ordinance shall, upon conviction thereof, before the police court of said city, be fined a sum not to exceed fifty dollars, or imprisonment for a period not to exceed thirty days."

STAGES DISPLACED IN NEVADA.

Special Correspondence.

DENVER, July 20.—In the new gold fields of Nevada the stage coach has given place to the automobile. There are sixteen automobiles in operation between Tonopah and Goldfield, a distance of thirty miles.

The route traversed is over some of the worst roads in the West, and is covered by the automobiles in but little more than one hour as against three and one-half hours by the old-time stage.

Between Goldfield and Bullfrog about a half dozen machines are now in regular use. This route is seventy-five miles long, and is made in six hours, while ten hours were consumed by the old means of conveyance.

Special roads have been built, and are used solely by the automobilists plying between Tonopah, Goldfield and Bullfrog. Another road of this kind is being constructed to Las Vegas, N. M., on the new Salt Lake and Los Angeles railroad.

Burr Vermilyea is thinking of getting an auto to make his rural route trips in. The auto thing will be all right, and if Burr gets the "man killer" he will attach a big fog-horn to let everyone know "Uncle Sam" is a-comin'.—*Unionville (Pa.) Chronicle.*

THOUSAND ISLANDS CRUISERS.

To Be Entertained by Syracuse and Oswego Yachtsmen While en Route.

Special Correspondence.

SYRACUSE, N. Y., July 12.—Preparations are under way here to meet and suitably entertain the members of the American Power Boat Association, whose boats will pass through this city on the canals next month on their way to the annual races at the Thousand Islands, in the St. Lawrence river. Hudson is the rendezvous, and the fleet will leave there August 17. The first night will be spent at Albany, as the guests of the Albany Yacht Club, and early on August 18 the fleet will enter the Erie canal and proceed to Oswego.

From Utica to Syracuse there is a day's run without the interruption of a single lock. Near Utica some of the officers of the Syracuse Yacht Club will meet the fleet and accompany it to Syracuse, elaborate preparations being under way to entertain the mariners. Here the boats of the Syracuse Yacht Club and Buffalo Launch Club will join them, and the enlarged fleet will proceed to the station of the Oswego Yacht Club. The yachtsmen will be entertained at Oswego, too, and will prepare there for the last run down Lake Ontario and the St. Lawrence to the Thousand Islands.

On August 24 the first of three races for the Association's Challenge Cup will be held under the auspices of the Chippewa Yacht Club, and the cruising fleet will witness these races. On the evening of August 25 the visitors will be entertained by the Frontenac Yacht Club. The following day there will be a cruise among the islands, and in the afternoon the last race for the challenge cup will take place. At sunset of that day the power fleet will disband.

Some of the boats will remain in that region for weeks, while others will at once return by way of the St. Lawrence, Lake Champlain and the Hudson river. J. H. McIntosh, of New York, is chairman of the committee in charge of the cruise.

TOLEDO RACES JULY 30.

First Meet of the New Toledo Racing Association—Half Mile Track.

Special Correspondence.

TOLEDO, July 22.—The Toledo Motor Racing Association, recently organized, will hold its first meet Sunday, July 30. Seven events have been arranged, the last and most important of which is a match race for a purse of \$1,000 between Barney Oldfield and Earl Kiser, best two in three heats. The other events are:

Two-mile novelty race for touring cars fully equipped and carrying three passengers and a driver; passengers to be unloaded and picked up again during race.

Five miles, open to stripped touring cars.

Five miles, open to cars of 20-horsepower.

Five miles, free for all.

Five miles, for motorcycles.

Three-mile handicap, free for all.

Earl Kiser is now in the city and has tried his machine on the half-mile track, on which the races will be run. Barney Oldfield will arrive early next week.

According to W. H. Pickens, manager for Oldfield, who is at present in the city, it depends upon the July 30 meet whether or not Toledo will be included in the automobile racing circuit which is now being formed. The meet will be held under the rules and sanction of the A. A. A.

ANNUAL MOTORCYCLE MEET:

Racing and Fun at Annual Gathering of F. A. M. at Waltham, Mass.

The third annual meet of the Federation of American Motorcyclists will be held at Waltham, Mass., during the second week in August, the various races, hill climbs and pleasure runs occupying nearly the entire week. The Waltham Autocycle Club has arranged a list of events to be run off in conjunction with the meet, and motorcyclists all over the country are looking forward to the meet with pleasurable anticipation. The F. A. M. has always aimed to make its meets occasions of jollity and relaxation, the prevailing feeling being that the main object is not so much to race and win prizes as to have an enjoyable outing amidst pleasant surroundings.

The roads for the road races and touring trips are said to be very good. Prospect Hill, where the hill-climbing contest will be held, is a series of gentle grades and steep pitches, sharp turns and straight stretches, the whole shaded by fine trees. Track races will be held on the Waltham bicycle track, where contests of skill and short races will be decided, while the longer events will be held at the Charles River track, which is banked, and permits of high speed. One of the special features of the meet will be the fuel economy test, in which each contestant will be given a pint of gasoline and started, the machine making the greatest mileage winning the first prize. Three prizes are offered. Programs and entry blanks may be obtained from L. E. French, P. O. Box 3, Waltham, Mass. The lists close August 1.

MILWAUKEE CLUB MEETING.

Report Changing Name Favorably Received.—New Members Elected.

Special Correspondence.

MILWAUKEE, July 22.—At a meeting of the Milwaukee Automobile Club, held in the Pfister Hotel last evening, the committee appointed to formulate plans for increasing the membership and scope of the club submitted its recommendations, which were favorably received.

Among other things, the committee recommended that in order to place the organization on a sound basis, and to give it proper legal standing, that a corporation be organized without capital stock; that in order to build up a strong non-resident or associate membership recruited from the State at large the name of the club be changed to the Automobile Club of Wisconsin; that a suitable club house be erected or club rooms in connection with a conveniently located garage be secured. The initiation fee was fixed at \$15 for active members, and the annual dues were placed at \$10.

The following members were elected: Charles F. Pfister, Albert O. Trostel, Harry Landauer, W. B. Uihlein, Charles H. Stehling, G. J. Hansen, E. F. Niedecken, I. L. Nicholson, Jr., and Harry W. Bolens, Port Washington, Wis.

NEWS NOTES OF THE CLUBS.

BUFFALO.—Evidence of the generous spirit of the members of the Automobile Club of Buffalo was shown Saturday by the announcement that the club has tendered the use of its automobiles to the orphans in the various Buffalo institutions, and the children will be given a ride about the city on Wednesday, August 9.

GRAND RAPIDS, MICH.—An excursion of crippled children from Chicago was entertained with an automobile ride about the

city Sunday. Members of the Grand Rapids Automobile Club placed machines at the disposal of the cripples, and they were taken to all points of interest.

PITTSBURG, PA.—The Pittsburgh Motorcycle Club has elected the following officers for the ensuing year: R. Frick, president; J. Depp, secretary; A. Schmidt, J. Watson, E. Eisenberg, H. Bartell and W. Porter, executive board. The secretary's permanent address is No. 1318 Adams street.

MARSHALLTOWN, IA.—The Marshalltown Automobile Club has been formed here with a charter list of sixteen members, and has elected the following officers: C. E. Eadie, president; Dr. H. L. Getz, vice-president; Dr. A. C. Conaway, secretary, and W. H. Burrows, treasurer. The regular meetings of the club will be held the first Monday in each month. Arrangements are now under way for a race meet at an early date.

PEORIA, ILL.—A legal committee has been appointed to represent the Peoria Automobile Club in conference with the city council for a discussion of the proposed automobile ordinance which is intended to supersede the present law. The committee is composed of W. W. Hammond, chairman; Herman Danforth and C. A. Bartholomew.

MINNEAPOLIS, MINN.—If the present plans of the Minneapolis Automobile Club are successfully carried out, the club will have most comfortable quarters for the remainder of the season. Efforts are being made to secure the use of the Long Meadow Gun Club's house. Negotiations have been under way for some time, and indications are that the clubhouse will be secured.

MUSKEGON, MICH.—The Muskegon Motorcycle Club has decided to hold a race meet in this city on Labor Day. Riders from all over the country will be invited to take part, and unusually high stakes will be raced.

PONTIAC COMPANY TO BUILD

Special Correspondence.

PONTIAC, MICH., July 21.—The Rapid Motor Vehicle Company, of this city, which recently increased its capital stock from \$100,000 to \$240,000, is now planning extensive improvements to meet the requirements of its business.

The company has secured a twenty-acre tract, which is in the shape of an irregular triangle, on which it will erect a main factory building, 500 by 50 feet, two stories in height. A strip 2,000 by 50 by 250 feet will be reserved for factory buildings, and on the remainder of the ground operatives' houses will be built. The land fronts 300 feet on the D. G. H. & M. R. R., and switches from the main line will be run into the factory buildings.

Until the new plant is completed the company will continue the manufacture of its cars in its present factory.

MEETING OF PARTS MAKERS.

The semi-annual meeting of the Motor and Accessory Manufacturers, Inc., has been called by Secretary J. W. Gilson, of Hartford, Conn., to be held at 11 o'clock A.M., on August 4 at the Cadillac Hotel, Detroit.

Several matters of importance will be presented for consideration at this meeting, including the report of the committee with regard to the New York and Chicago shows, and also plans for enlarging the scope of the association. The secretary has urged that a full representation of the membership be present.

It has been arranged to reserve a number of seats for the races on August 4 and 5 so that the members may attend in a body.

NEW DEALERS' ASSOCIATION

Permanently Organized and Its Real Objects Outlined.

Special Correspondence.

BUFFALO, July 24.—Since the organization of the National Association of Automobile Dealers in this city, last week, there has been much discussion as to the real purpose of the association. It has been said that one of the prime objects of the retail dealers in banding together is to obtain from the manufacturers larger discounts. Another is the claim that the retail dealers want an arrangement whereby the manufacturer, if he fails to deliver a car, shall return not only the deposit made by the retailer, but also a sum equal to the profit the dealer would have made had the car been delivered.

Be this as it may, it is apparent from the statements of Wellington C. Jaynes, of the Jaynes Autocar Works of Buffalo, who was elected president of the association, that the chief object of the retailers in organizing is to protect themselves and to better trade conditions, in so far as they relate to the manufacture and sale of the automobile. It is not the purpose of the organization to antagonize the manufacturers' association, neither to buck it in any way, but rather to co-operate with the manufacturers in the betterment of trade conditions and work in harmony with the stronger association.

President Jaynes, in speaking of the new association, said to a representative of THE AUTOMOBILE:

"We organized to confer with the manufacturers in regard to matters affecting the trade. The automobile manufacturers are powerfully organized and have done a great deal of good to the industry, but have not regulated the industry beyond their own doors. The retail dealers have never been organized. Certain abuses have crept into the trade independent of and connected with the manufacturers. There is not a clear understanding between the trade dealers and the manufacturers regarding certain matters.

"Primarily, the object is to have the heads of each association get together and unite upon a plan or policy for the ensuing year or years, which will lead to the betterment of the trade. It is not the object of the retail men to antagonize the manufacturers; it is far from that. Nor is there any idea to injure them in the slightest way; it is a case of co-operation."

The association will have representatives in all of the larger cities throughout the United States. About thirty dealers attended the meetings last Monday and Tuesday at the Lafayette Hotel, when permanent organization was effected and officers and directors elected, results of which were announced in THE AUTOMOBILE of July 20. In addition to the officers and directors named, the following prominent members of the trade were present: C. C. Stolz, Marion, O.; Thomas E. Curtin, Columbus, O.; W. P. L. Newman, Detroit; F. E. Avery, Columbus, O.; George W. Hart, Grand Rapids; George Miller, Baltimore; Thomas B. Gould and Arthur L. Banker, of Pittsburg. Mrs. May Post, of Cleveland, was also present and is the only woman member of the association.

The committee on organization was made up of F. G. Smith, Jr., W. C. Jaynes, J. N. Willys, of Elmira; P. L. Neal and William M. Murray.

On Monday evening the visitors were the guests of E. R. Thomas, the well-known Buffalo manufacturer, who took them to Grand Island. They were taken in automobiles to the Ferry street docks and thence aboard the steamer *Ossian Bedell* to the Bedell House.



W. G. Newlin has secured the agency for the Rambler cars at Benton Harbor, Mich., and has opened an office at No. 128 Pipe-stone street.

The Powell Automobile Company, of Omaha, Neb., has removed to its new garage on Farnam street, just west of the Bachelor's Hotel.

On account of the heavy rains on Saturday, July 22, the race meet scheduled for Cape May Beach for that date was postponed until Saturday, July 29.

The Yale Automobile Company, Chicago agents for the Yale cars, has removed its salesrooms from 1414 to 1413 Michigan avenue—just across the street.

Ex-Senator H. S. Earle, Good Roads Commissioner for Michigan, has called a good roads convention to be held in Port Huron, Mich., August 29, 30 and 31.

The Mitchell Manufacturing Company, of Portsmouth, Ohio, is now converting its plant into an automobile garage and installing a thoroughly up-to-date repair department.

The Chicago branch of the Electric Vehicle Company has removed from 1413 Michigan avenue to its larger and more commodious quarters at 1332-1334 Michigan avenue.

C. H. Gillette, formerly secretary of the American Automobile Association, has been appointed manager of the automobile liability department of the Aetna Insurance Company, of Hartford, Conn.

The Githers Brothers Co., agents for the Oldsmobiles and Yale cars, has removed from 1412 Michigan avenue to its new building at 1328-1330 Michigan avenue, Chicago. In its new quarters the company has a floor space of 13,800 square feet.

The Buick Motor Company, of Jackson and Flint, Mich., has leased the premises at 1412 and 1414 Michigan avenue, Chicago, recently vacated by the Yale and Olds agencies, and is now fitting the quarters for early occupancy by its Chicago branch.

The Savannah Baggage and Cab Company, which operates a cab and bus business in Savannah, Ga., is now planning to establish a "Seeing Savannah" bus service in the early fall. Two automobiles, of twenty-five-passenger capacity, will be used.

The South Haven Automobile Company, recently organized at South Haven, Mich., has inaugurated an automobile passenger service between that point and the nearby towns. Two touring cars are now in use, and more will be added as the business demands.

Agents for Thos. B. Jeffery & Company throughout the country have been notified that in addition to the contemplated outfit of Ramblers for 1905 the company will build 500 extra surrey type cars in order to meet the demand during the summer and early fall.

Lafayette Markle, recently associated with the Central Automobile Company, New York agents for the Corbin Motor Car Company, has joined the forces of the Corbin Company at New Britain, and will in future be connected with its engineering department.

The Missouri, Kansas & Texas Railroad Company has decided to put in operation an interurban automobile service over its branch road between Denison and Sherman,

Texas. The plans of the company provide also for a line of such cars in Denison and one in Sherman to connect with the inter-city line.

Joseph W. Moon Buggy Co., of St. Louis, Mo., has entered the automobile field, and will market a 30-35-horsepower touring car. The first car is now well under way, and will be completed in about two weeks. Only one type of chassis will be made. Owing to this change in its business the company will make extensive additions to its plant.

The construction of the new plant of H. F. Borbein & Co., on North Ninth street, St. Louis, is progressing rapidly. The foundation is completed, and work is being pushed on the building proper. The new factory is located just across the street from the old plant, and when completed the company will have more than twice the amount of floor space heretofore used.

A two-story brick building, 80 by 80 feet, is now being erected as an addition to the plant of the New Process Raw Hide Company, of Syracuse, N. Y., makers of gears and rawhide pinions. The new building is expected to be completed about the middle of September, and will be used exclusively as a machine shop. The increased facilities thus afforded will practically double the capacity of the factory.

The Western Automobile Company has recently opened an up-to-date garage and salesroom at No. 384 Cedar street, St. Paul, Minn., and in addition to handling the Peerless, Northern and Baker cars a general storage and repair business will be conducted. George H. Stout, formerly vice-president and manager of the Acme Motor Car Company, of New York, is president of the company, and R. C. Holbert is vice-president.

A meeting of the executive committee, the patents holding committee, the trades and agency committee and the show committee of the Association of Licensed Automobile Manufacturers will be held at the International Hotel, Niagara Falls, on July 27. Following the meeting of these committees, they will render their respective reports to a meeting of the board of managers of the Association which will be held at the same place on July 28-29.

Plans have been completed and contract awarded to Charles A. Sicard for the construction of a garage at Nos. 217-223 South Rampart street, New Orleans, for the Crescent City Automobile Co. The building will be equipped with modern devices for the repair and care of automobiles, and will afford ample space for the storage of machines and also for commodious salesrooms. W. Philip Johnston is president of the company, and Charles U. Kennedy sales manager.

The Miller Motor Car and Supply Company, of Bridgeport, Conn., agents for the Maxwell cars, has recently completed its new garage, located in the center of the city, and directly on the main line from New York to Boston. The new building is 44 by 100 feet, and is equipped with modern appliances for the conduct of its business, and, in addition, waiting rooms are provided for the convenience of its patrons. The company also carries a full line of automobile supplies.

At a meeting of the western classification committee, representing the railroads west of Chicago, which was held at Charlevoix,

Mich., last week, a reduction was made in the freight rates on automobiles. Under the new classification automobiles "knocked down" and crated, or boxed, and shipped in less than carload lots, will be accepted at the rate for first-class freight instead of at three times the first-class rate, as is now charged. This reduction will take effect October 1 next, and applies to the territory west of Chicago.

RECENT INCORPORATIONS.

Couple Gear Freight Wheel Co., Grand Rapids, Mich.; capital, \$500,000.

Park Auto Co., Wilmington, Del.; capital, \$20,000; to deal in automobiles.

D'Arsi Auto Gas Flame Co., New York; capital, \$100,000. Directors: F. M. D'Arsi, J. O. Wolf and A. J. Wilmer.

Duluth Automobile Co., Duluth, Minn.; capital, \$10,000. Incorporators: R. J. Davis, M. R. Dick and H. C. Fulton.

Tuxedo Garage Co., New York; capital, \$40,000. Directors: C. A. Gerlach, S. S. Leo and H. M. Hergert, all of New York.

Excelsior Automobile Co., New York; capital, \$6,000. Directors: Samuel Labovits, M. H. Fockdorf and Joseph Ruben, all of New York.

Mercantile Motor Co., Jersey City, N. J.; capital, \$200,000. Incorporators: Albert H. Overman, Ward B. Chamberlain and Albert B. Chamberlain.

Stanton Mfg. Co., Union, N. J.; capital, \$100,000; to manufacture automobiles and parts thereof. Incorporators: A. C. Stanton, Maxwell K. Willoughby and Frank Southmayd.

Pneumatic Tire Protector Co., Dayton, O.; capital, \$10,000; to manufacture rubber fabric tire protectors. Incorporators: Walter S. Thomas, G. T. Thomas, D. W. Wood and E. E. Coate.

Aster Co., New York; capital, \$250,000; to manufacture automobiles, boats, etc. Incorporators: A. J. Myers and Alfred Epstein, of New York, and Fred Komp, Rutherford, N. J.

Palace Automobile & Machine Co., New York; capital, \$30,000; to manufacture automobiles. Incorporators: Hamilton Farnham, Charles H. Darmstadt and Louis Farnham, all of New York.

Traverse and Peninsula Traction Co., Traverse City, Mich.; capital, \$30,000; to operate passenger bus lines. Incorporators: W. H. Blake, H. O. Joynt, J. W. Blakeslee and Charles Prochaska, Jr.

Princeton Garage Co., Princeton, N. J.; capital, \$2,100; to store, care for and repair automobiles. Incorporators: Thornton Conover, Edward C. Kopp, Louis J. Campbell and Charles J. Wyman, all of Princeton.

The Belden Automobile Transmission Co., Jersey City, N. J.; capital, \$200,000; to manufacture appliances to be used for the Belden system of power transmission and control of automobiles. Incorporators: H. O. Coughlan, T. F. Barrett and J. M. Woods, all of Jersey City.

Muskegon Motor Co., Muskegon, Mich.; capital, \$5,000; to deal in automobiles, motorcycles, bicycles and gasoline engines, both auto and marine. Officers: Dr. C. J. Dove, president; Milo Pray, secretary-treasurer, and William Stover, Percy Anderson and Alphonse Gagnon, board of directors.

INFORMATION FOR BUYERS.

BUILDING DURYEA CARS.—The merits of the Duryea three-cylinder automobiles have appealed so strongly to the Waterloo Motor Works, of Waterloo, Iowa, that arrangements have been made by this concern to manufacture the cars under the Duryea patents, and the field of operation will be large, comprising all the territory west of the State of Pennsylvania. The Waterloo company has been engaged in the manufacture of gas and gasoline motors, and is well equipped for the work undertaken. In addition to the standard Duryea cars, the Waterloo company will build a tonneau car with straight line body, wheel steering gear and Briscoe honeycomb radiator. In its other features it will be exactly the same as the other Duryea cars. This is the third factory to undertake the manufacture of these cars; the parent factory at Reading being the first and there being a branch factory in Coventry, England, where the Duryea cars are used in considerable numbers.

WARNER AUTOMETERS.—The Warner Autometer, a speed-recording instrument for automobiles, which is rapidly making a name for itself among automobilists, is handled in New York City by Sidney A. Bean, of 1691 Broadway, representing the Warner Instrument Co., of Beloit, Wis. Instruments are carried in stock suitable for the majority of cars of standard make and immediate deliveries can be made. It will be remembered that the Warner instrument is magnetically operated. It was one of these appliances that Guy Vaughan used on the 40-horsepower Decauville car in the recent record-breaking 1,000 mile run at the Empire City track, Yonkers.

SPEEDOMETER TAG.—A unique idea has been carried out by the Jones Speedometer Co., of 129 West Thirty-Second St., New York, which is not only up-to-date advertising, but is likely to be of benefit to those who make use of it. With every Jones speedometer goes a round brass tag, three and a half inches in diameter, with a leather strap attached. The tag is lettered as follows: "Police Notice.—This Car is Equipped with a Jones Speedometer. The Driver

Knows His Speed. Don't Arrest on Guess-work." This tag is to be attached by means of the strap to the rear axle of the car, near the registration number, or to any other conspicuous place. The idea is that the police, who have, it is said, already formed the habit of glancing at the dashboard of a car to see if there is a speed-indicating instrument before "doing their duty," will always look for the brass tag before interfering with the drivers, and an officer will make sure that his case is clear before making an arrest.

TRADE LITERATURE.

Boss Knitting Machine Works, Reading, Pa.—Circular describing the "Boss" steam runabout, which uses kerosene for fuel.

Byrne, Kingston & Co., Kokomo, Ind.—Catalogue of Kingston carbureters, mufflers, spark coils, plugs, steering wheels and water pumps.

New Process Raw Hide Co., Syracuse, N. Y.—Booklet explaining the advantages of rawhide noiseless gearing for power transmission.

The Bartholomew Co., Peoria, Ill.—Mail-order card giving brief description and an illustration of the 9-10-horsepower single cylinder Glideabout.

Imperial Brass Mfg. Co., 247 South Jefferson St., Chicago.—Circular about the Imperial-Wixom double-cylinder compound tire pump, in which one cylinder is inside the other.

Follansbee Brothers Co., Pittsburg, Pa.—Circular describing Dickey patent planished sheet steel. This material is said by the manufacturers to possess unusually fine qualities.

Bowen Mfg. Co., Auburn, N. Y.—Illustrated price list of "Empress" plain compression grease cups, of brass and steel; and ratchet grease cups, also of brass and steel; all made especially for use on automobile machinery.

Duluth Gas Engine Works, Duluth,

Minn.—Circular describing and illustrating the "Crescent" reversible propeller, made with special reference to its use in auxiliary craft. This propeller has very few parts, and is so constructed as not to "drag" when the boat is under sail.

The Motor & Mfg. Works, Ithica, N. Y.—Catalogue of mufflers made on the ejector principle. The gases are mingled with and cooled by a large volume of cold air drawn into the muffler by the gases themselves, and the result is said to be a muffler that is practically noiseless and without back pressure.

Kerosene Power Co., 121 East Thirteenth St., New York.—Circular giving description and price list of kerosene burners for small boilers; these burners range in size from 13 to 20 inches. The manufacturers state that they can be started in three minutes, only a match being necessary, and that they will not smoke or back fire.

Simms Mfg. Co., Ltd., Welbeck Works, Kimberley Road, Kilburn, London, N. W., England.—Circular describing and illustrating the Simms safety buffer for automobiles. This is a curved pneumatic cushion mounted on a bracket and extending horizontally in front of the car so as to push aside anything movable that might be struck.

J. Kowalsky Engine Co., Verona, Pa.—Illustrated circular and price list of small motors and complete outfits. The engines are compact and light in weight, of the two-cycle type. The manufacturers state that the material and workmanship are of the best, and that they are reliable and powerful. The smaller size is especially suitable for installing in rowboats; the prices are very reasonable.

Dover Stamping & Mfg. Co., 385 Putnam Ave., Cambridge, Mass.—Mailing card, describing drip pans made by this concern. These are wide, shallow metal pans, which are placed under cars to catch any oil that may drip from the machinery. The pans are made of heavy galvanized sheet steel with steel rod edges. For runabouts the pan is 35 inches wide and 47 inches long; for touring cars, the same width, but 95 inches long.

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SPECIAL NOTICES

Advertisements inserted under this heading at 20 cents per line; about 7 words make a line. Remittance should accompany copy. Replies forwarded if postage is furnished.

A TEN-PASSENGER WAGONETTE; sample car; 1905-6 model; steam; price and description on application. Thompson Auto Co., Olneyville sq., Providence, R. I. Aug. 3

AUTOS WANTED—Will exchange \$1,500 mortgage drawing 6 per cent., for automobile of good make that will carry five people; machine must be in perfect condition; state make and give full particulars upon first writing. T. W. White, 145 Farson St., Philadelphia, Pa. 20-27

A SPLENDID OPPORTUNITY for hotel and livery. Two 2-seated and two 3-seated brakes and one 16-passenger bus, all electric, will be sold at low prices and easy terms, to close manufacturing business. Standard construction, practically new, and in first-class condition every way, including batteries; run but very little. Send for photos and prices. S. F. Bancroft, 1400 Michigan Ave., Chicago, Ill. t.f.

ARTILLERY WHEELS—We have a collection of a few odd sets of Midgley pressed steel wheels with clincher, perfected Dunlop and single tube rims, which could be used to advantage in building a new machine or in remodeling an old one. This collection is a miscellaneous one, composed of sample sets, exhibition wheels and unsold stock, and wheel set under guarantee. They will improve the appearance of your machine and make your old car look like an up-to-date model. While they last we are offering them at extremely low prices. We have a special offer to make Stanley agents and machine owners. Write for booklet. The Midgley Mfg. Co., Columbus, Ohio. Aug. 17

EXCHANGE HOUSE and lot, 22 orange trees bearing twenty years, near Los Angeles, Cal., for automobile. H. K. Miller, Laconia, N. Y. July 27

FOR SALE—\$500.00 Knox 1903. Wheel steer, all in good order, tires good. F. N. Dounce, Elmira, N. Y. July 27

FOR SALE—1904 Franklin Tonneau; like new; \$1,000. Address Chauncey D. Hakes, Albany, N. Y. Aug. 10

FOR SALE—Model E Rambler in good condition, \$350. Address W. H. Hodson, M.D., Lockport, N. Y. July 27

FOR SALE—Bargain; Columbia gasoline automobile, 8 h. p.; write for prices and particulars. Box 347, Erie, Pa. 20-27

FOR SALE at sacrifice, 1905 new Model C Winton; larger car wanted, same make. Address, Newport, care The Automobile. 20-27

FOR SALE—One Winton, 1903 model; brand new rear tires; guarantee good looks and running condition; \$465. Campbell Auto Co., Marion, Ind. July 27

FOR SALE—The Wonder gas engine igniter for \$4.50. For either make and brake, or jump spark. R. M. Cornwell Co., 418 So. Salina st., Syracuse, N. Y. t.f.

FOR SALE—1903 White Steamer; 1904 hood and wind shield. Guaranteed in first class mechanical condition. Revarnished. \$865. B., care The Automobile. July 20-27 Aug. 3-10

FOR SALE—Orient Buckboard, in excellent running order; silent muffler, rawhide pinion. Price reasonable. Address C. G. Fitch, 715 Ft. Wayne Ave., Indianapolis, Ind. Aug. 3

FOR SALE—50 h. p. "Boyer," imported 1904; fitted with Michelin tires; in perfect condition; price very low. Pope Manufacturing Co., 223 Columbus av., Boston, Mass. July 13 t.f.

FOR SALE—1905 Model, 20 h. p.; run 400 miles; good as new; cost \$1,800; will sell for \$850; full equipment of lamps and tools. Address Dr. George Price, 1303 Seventh Ave., Altoona, Pa. July 27

FOR SALE—White Stanhope; good condition; good tires; \$250. Wayne Model A; used only two months; good as new; \$750. 1904 Oldsmobile with canopy top; \$350. Write for further particulars. Willson Ave. Auto. Co., Cleveland, O. July 27

FOR SALE—Grout steamer, good as new, half price. De Dion Surrey, \$295; Pierce Motorette, \$385; Rambler Runabout, \$290; Darracq, \$450; Toledo steamer, \$225. Many others. Write for prices. Tanner & Co., New Bedford, Mass. July 27

FOR SALE—Just offered, prompt disposal, 24-32 h.p. Panhard & Levassor runabout or cross country body for two Long chassis, separate cylinders, 1905; complete equipment, lamps, tires, tools, etc. Owner going away for prolonged absence is cause of sale. Car is in perfect condition. Price, \$4,350. Address "Twenty-four Panhard," care The Automobile. July 27

FOR RENT—Finest new garage; auto and accessories, salesroom; machine shop; storage lofts and elevator; chauffeurs; toilets, etc.; office and all else complete, ready for business and money making; situated in the trade near Columbus Circle, Central Park and Broadway. Mack & Tuthill, Real Estate, 1900 Broadway cor. 63rd St. New York City.

FOR SALE—Up-to-date 15-horsepower Panhard, with new side door body by Kimball, new Capetown top, new Krebs carburetor; latest steering gear; machinery thoroughly overhauled and in A1 condition; car newly painted and ready for use; equipped for touring; as good as new, fine appearance and high class in every way. Address J. J. Scott, 7 Monroe St., Chicago, Ill. t.f.

LOCOMOBILE BODY, with water tank, standard size. A1 condition, good paint, cushion and dash. Price, \$10. Low water alarm, \$6. Victor water pump, A1 condition, \$13. Dietz brass oil lamp, \$5. R. Roth, 1423 North Ave., Bridgeport, Conn. July 27

MATHESON car at liberal demonstrating discount. The entire 1905 product being now sold. Demonstration given. Shepard Bros. Agents, 500 Fifth Ave., New York City. 'Phone 6243 35th t.f.

MANHATTAN STORAGE COMPANY, the largest dealers of second-hand, shopworn and demonstrating cars in America. Automobiles from \$75 up to \$3,000, worth from \$750 to \$8,500. Write, call or telephone 334-336-338-340 West 44th St., New York City, near 9th Ave., two blocks from 42d St. "L" station, three blocks from Subway. 'Phone, No. 4290 38th. July 27

OLDS RUNABOUT, almost new, with extra seat, at a bargain. Address O. T. Knode, Richmond, Ind. July 27